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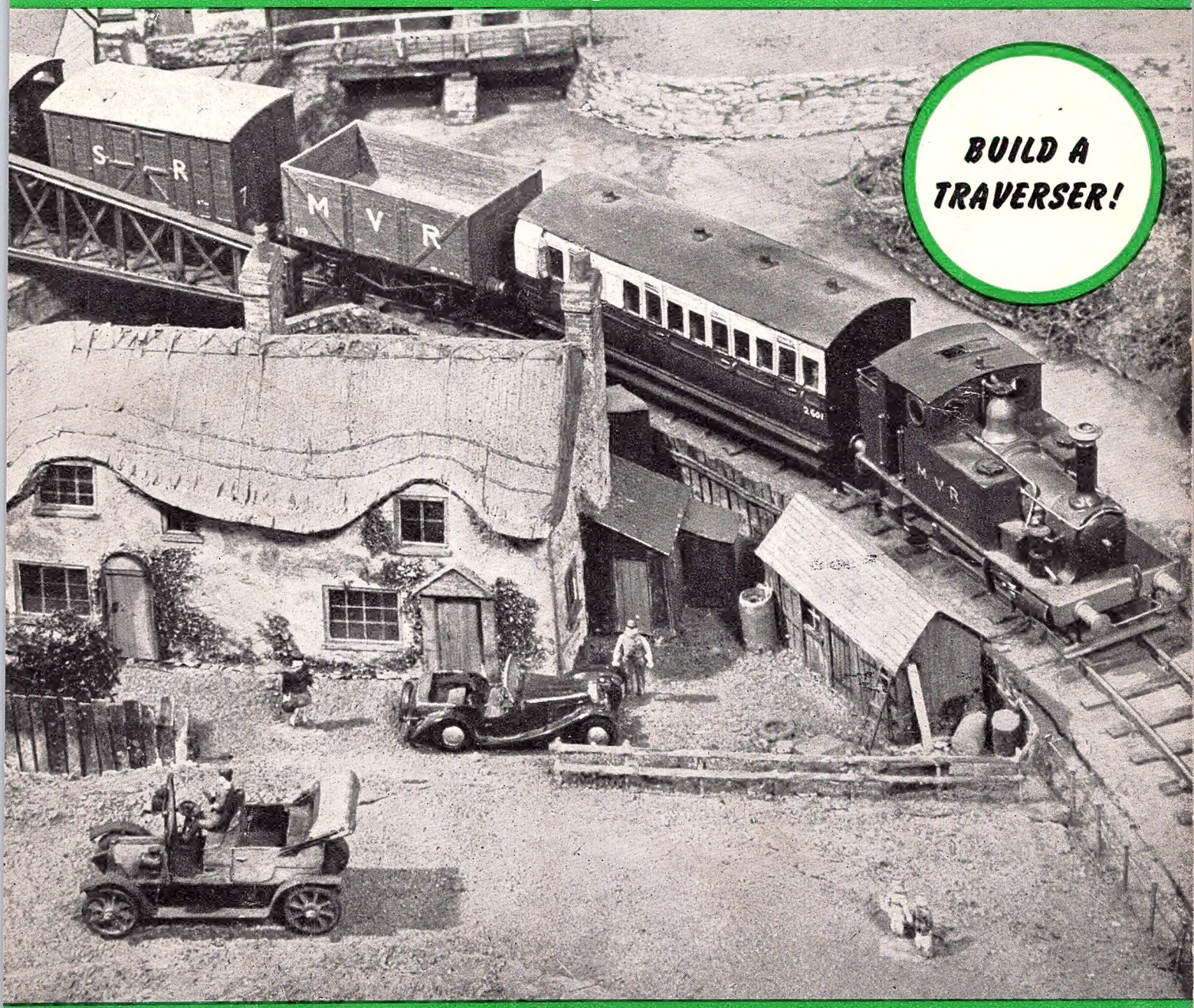

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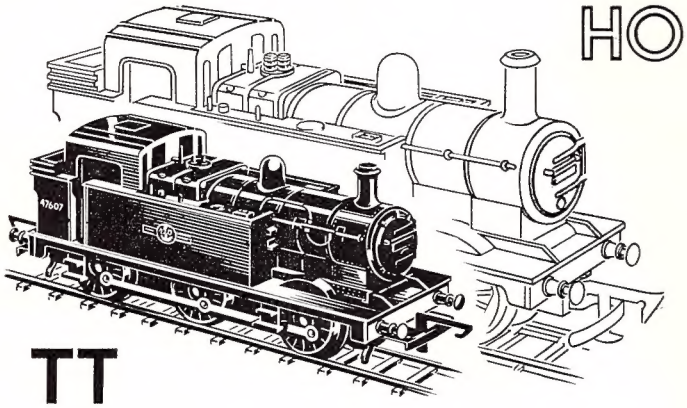

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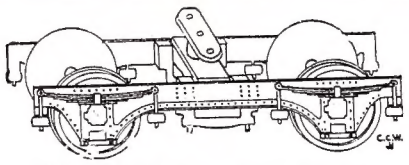

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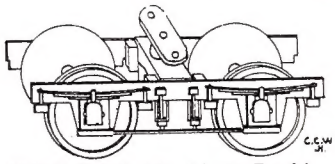

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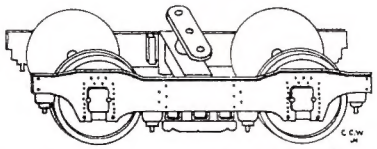

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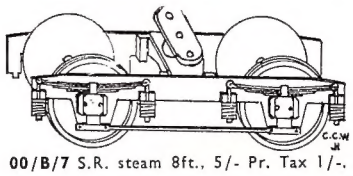

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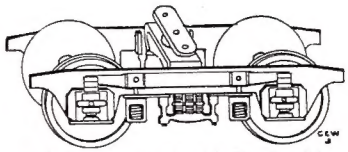

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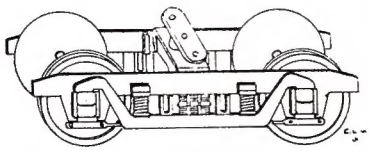

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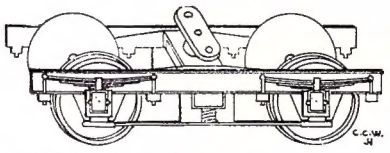

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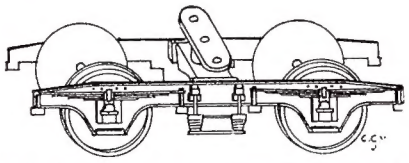

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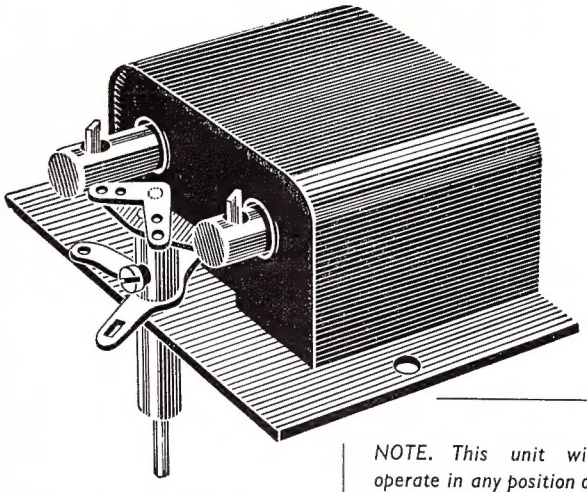

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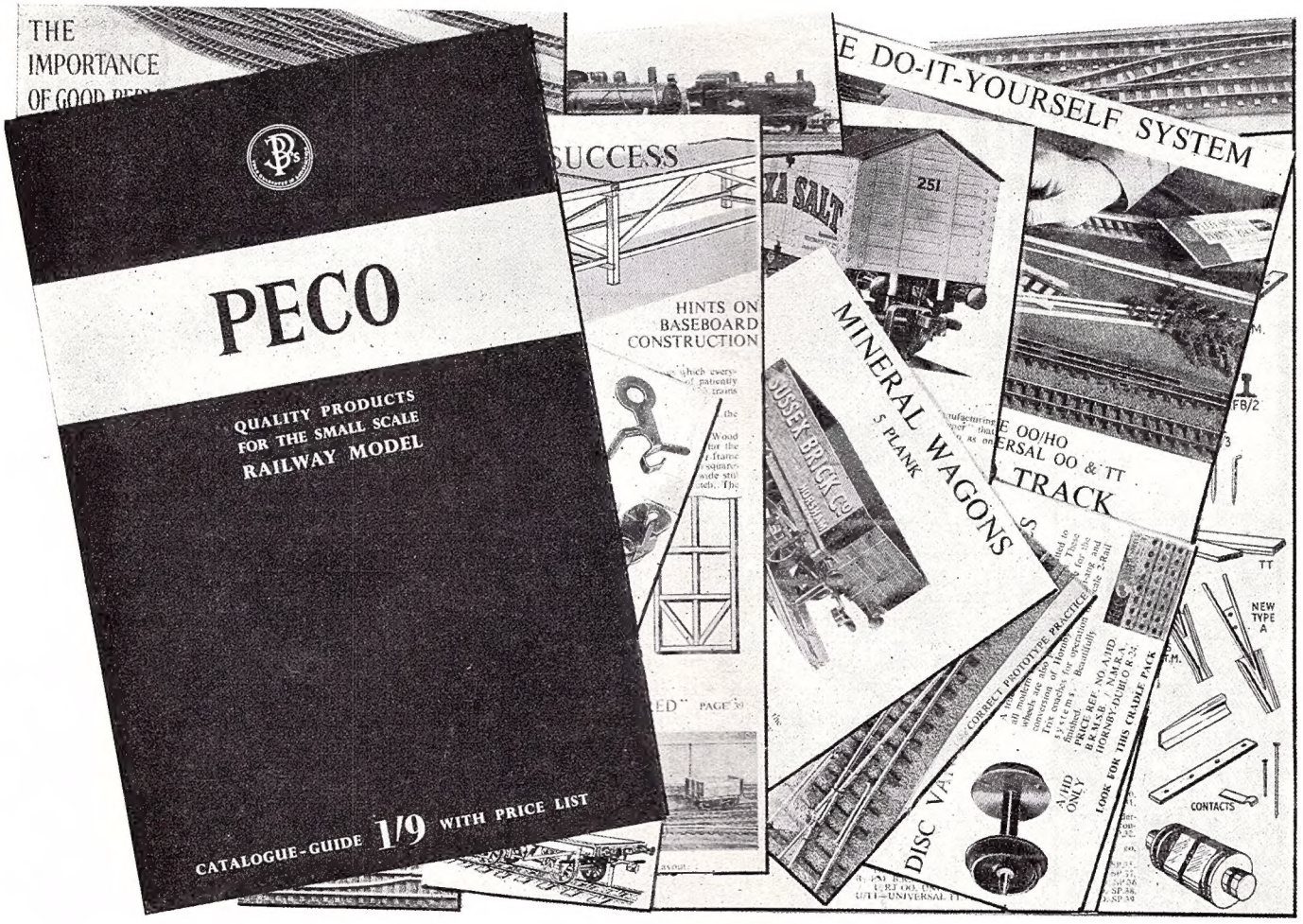

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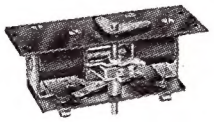

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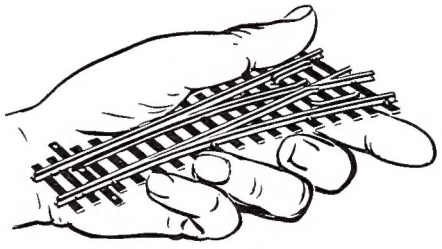

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The Lobby

YOU should never cross your viaducts until the track is laid. The old proverb adapted to our own idiom makes equal sense, and yet that is just what so many people try to do. The very richness of our hobby opens up so many channels that even modellers of long standing will frankly admit that they have no more than a nodding acquaintance with many branches which happen to lie outside their immediate orbit. How then can a relative beginner possibly hope, in a few short months, to master it all ?

Fortunately, complete mastery is by no means necessary. Indeed the basic elements of railway modelling are simplicity itself, and the amount of " know-how " required is no more than you need to lay out a moderate-sized train set, plus a little elementary carpentry for the baseboard. This is not only sufficient to get the would-be modeller started, but is indeed, in most cases, quite enough to enable him to produce a very effective comprehensive layout.

The basic principles are simple. A friend of ours, who cheerfully admitted he was no electrician, and regarded wiring as a tedious necessity (his speciality was timetable working and train movements), was nevertheless very proud to show us the control panel he had worked out and wired unaided. And well he might, for he had, on his own initiative, wired it for cab control at a time when the idea was still considered pretty advanced in the best electrical circles. This points an obvious moral ; the electrical wizards were approaching the subject from their own angle, and were trying to simplify the very complex interlocking circuits with which they had entangled themselves. Our friend, on the other hand, had approached the subject from a different direction, for he was trying to devise a simple control to enable him to carry out the elaborate movements he required without having to juggle with several knobs at once, or locking the whole station on one controller.

A beginner, with his fresh approach, can at times solve long-standing problems. For example, it used to be assumed that it was quite impracticable to build a satisfactory " OO " layout on a 6ft. x 4ft. baseboard, as little more than an oval could be built—until several people who had never been told this set out and did it!

So if you do not understand block signalling, or you find that automatic control is a closed book, don't worry. These and many other problems may never arise in your case, and anyway it will be some little while before the need to deal with them becomes pressing. Build your baseboards, lay your track and get something running—this is achievement enough for a start, and you can go on from there in any direction that you choose.

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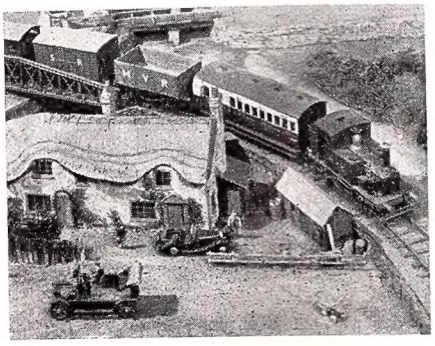

COVER PICTURE
A corner of John H. Ahern's famous Madder Valley Line.

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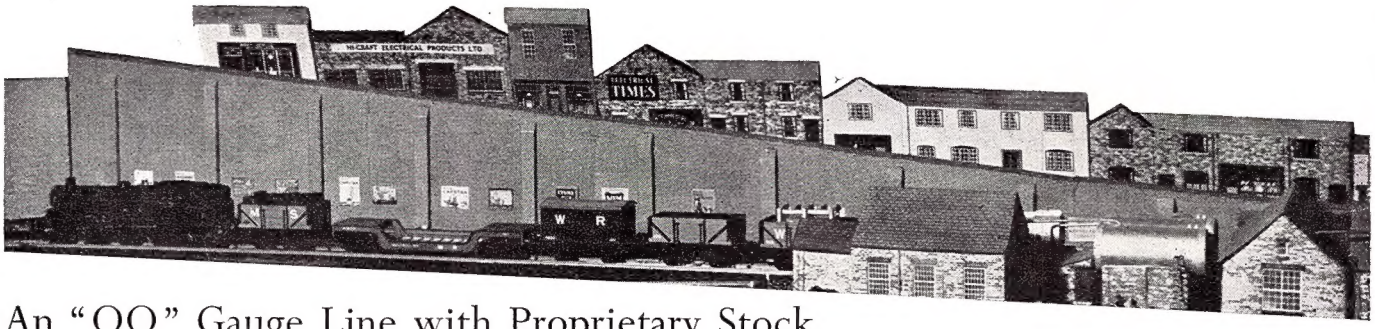
Railway of the Month

THE WOLD RAILWAY



Hornby 2-6-4, hauling mixed goods, passes the dairy.

An "OO" Gauge Line with Proprietary Stock

by D. K. Wilson and L. Hicken

THE bad weather of the summer of 1954 was responsible for the decision to construct the Wold Railway. Aeromodelling, which was our chief hobby up to that time, received a death blow by the high winds and rain of that period and we decided that the best alternative was to build a model railway. This object was assisted by the fact that I had acquired a new house with a large false roof all clean and dustless and that Mr. Hicken had a large twin-output transformer being somewhat wasted on a small layout in his shed. We were therefore able to plan the whole affair from scratch and decided to use Wrenn universal rail throughout, a fact which has since proved of the utmost importance for the operation of the various types of rolling stock and locomotives that we have by various means acquired.

The baseboards were constructed in the manner suggested in the model press, battens (2in. x 1in.) being spaced at foot intervals and covered, for economy rather than preference, with ¼in. pulp-board known as Essex board. Despite early doubts this material has proved very successful, having a greater sound-deadening effect than hardboard and being cheap at 4d. per square foot. Roofing felt was used as track ballast, being glued down with ordinary woodworker's glue.

Track laying was commenced with the crossover by the engine sheds and the twin main oval was completed in record time. As we had read somewhere that the chief object was to get something running we decided to purchase some locomotive power; and as funds were low, as usual, a Tri-ang tank was acquired and circulated until we were all dizzy. After this sample of things to come the layout, like Topsy, "just growed" and the Rasenby loop was completed. For a period this was connected to the main track and used as a return loop.

After the summer "recess" we returned to the fray armed with a little more cash and timber and resolved to complete the quarry section as soon as possible; this work is in progress as I write. The main stumbling-block to the quarry area was an awkwardly placed roof-supporting timber just where we wanted to go. After much thought and many plans we decided that the only practicable method would be to cut a hole in the timber and go through it with the track and camouflage the result with the suspension bridge as can be seen in the photograph, the nearest pier being the immovable piece of timber. A tunnel would perhaps have been easier, but as we had three of these already we thought it was rather overdoing things to add another.

The electrical side of the affair was taken care of, much to my relief, by Mr. Hicken, who constructed the main control board seen in the photograph with the aid of numerous circuit plans and large amounts of war-surplus equipment. Cab control is used, with twenty-six sections being duplicated on the two boards. Coloured lights are used to inform us that the transformer is switched on, to give change-over section warnings, as point operation indicators, and to inform us when supper is ready downstairs (this is unfortunately still in the experimental stage). Point operation for the solenoids is by multi-switch and push button. For the points in the Gainthorpe area the Mercontrol system is used, the lever frame being mounted on the baseboard just above the control board. Work still in progress in this department is a route-selection indicator to be placed at the back of the layout, which will light up the route when the section switches are brought in.

Locomotives and rolling stock comprise articles of most of the proprietary systems and several Wold Railway workshop jobs. Apart from the coupling question these have all proved satisfactory. The Marklin, Rivarossi and workshop items have all been equipped with Peco couplings, which operate with the Hornby stock, while the Tri-ang and Graham Farish can be adapted to form a somewhat unhappy union. When timetable and shunting operations start in earnest the coupling question will have to be tackled properly. I am hoping to arrange my holidays when this job is carried out!

After reading somewhere in the model press that blue was the colour to be avoided for rolling stock we decided to try it! It has turned out very well, and visitors can always be relied upon to comment on the choice, usually favourably. All the passenger stock with the exception of the Trix corridor coaches has been painted in the company colours, and the locomotives, with the exception of the Hornby 2-6-4, have been likewise treated. It is planned to operate the 2-6-4 and the Trix coaches as a B.R. train. A word of advice on the painting of Tri-ang plastic coaches is not to use cellulose paint for this job, as it results in a "crackle" finish—so popular in the typewriter industry but not to be recommended for coach sides.

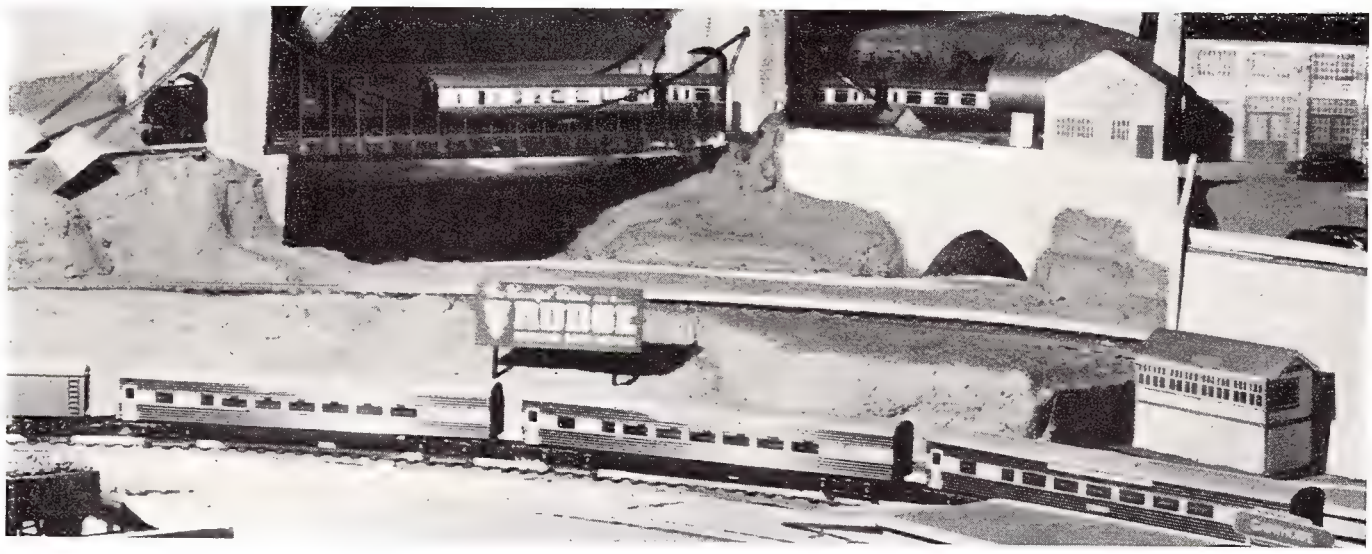
The locomotive stud at present in use comprises Hornby 2-6-4 tank, Graham Farish GP5 (new motor, as usual), Tri-ang 4-6-2 "Princess," two Tri-ang 0-6-0 tanks, Rivarossi 0-4-0 tank, with one workshop diesel railcar unit made up of three Tri-ang S.R. coaches with Rivarossi motor bogie. In the building stage is one Fowler 0-6-0 tender engine, while the new Tri-ang diesel locomotive looks just the thing to augment the fifteen-year modernization project the Wold Railway has announced.

The goods stock is as varied as the products of Messrs. Heinz, and here again the coupling question requires attention. Owing to the limited funds of the Wold Railway, private owner wagons are still encouraged on the system. This explains the four National Coal Board high-capacity bogie wagons which bring coal into the Rasenby coal carbonization plant for processing into fuel oil. They are Tri-ang gondola cars suitably painted and filled with the present-day substitute for coal.

All three-rail goods stock has been two-railed by the simple task of fitting Peco nylon wheels. We have tried to represent as many industries on the layout as possible, thereby allowing for the operation of very mixed goods trains, which goes a long way in keeping operation interesting.

Facing page—Top: The 7 a.m. "workers' special" rumbles past the farm en route for Gainthorpe.
Bottom: Rasenby station with local, comprising Tri-ang 0-6-0 and two Graham Farish suburban coaches.

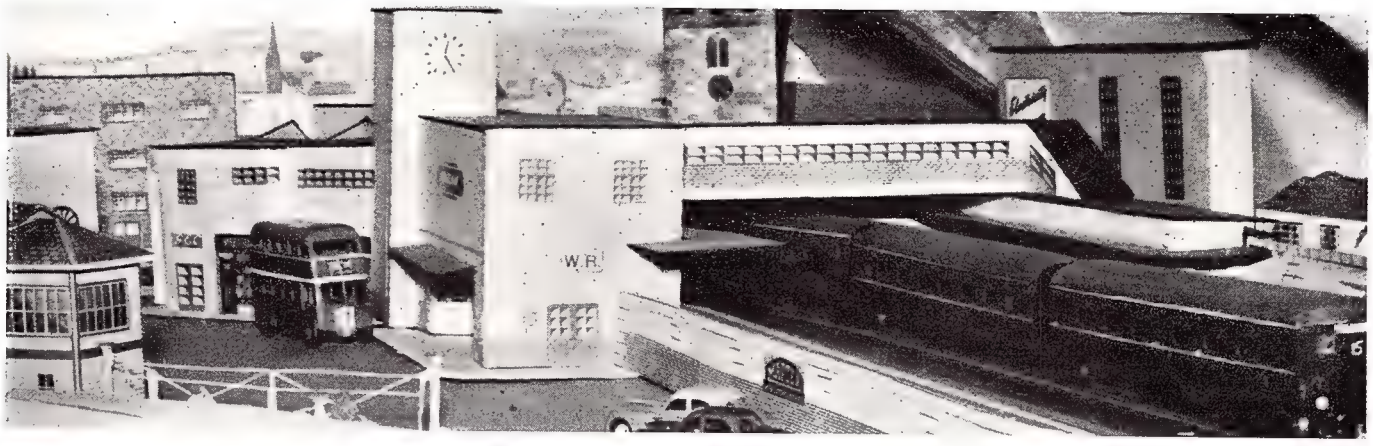
BOVRIL



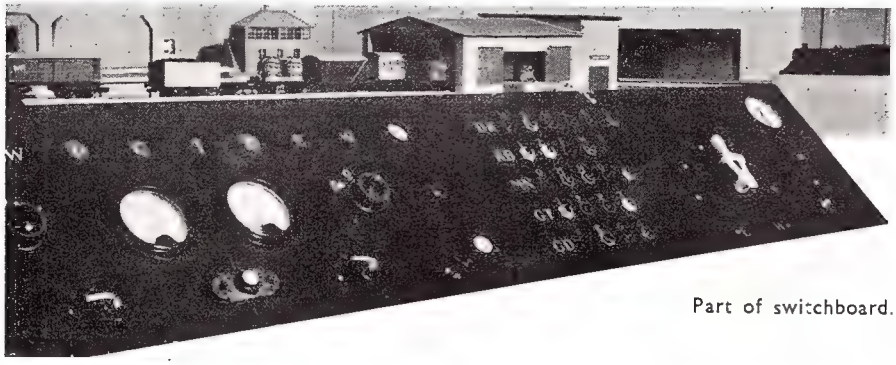
Eastern end of Gainthorpe station with suspension bridge in background. Nearest bridge tower is part of roof timbers (see text).

The scenery is of the usual plaster mix applied over framework of cardboard and sackcloth as recommended by Mr. Ahern in his book *Miniature Landscape Modelling*. There is still a lot to do in this department, as will be seen in the photographs; trees being non-existent at present. We did, however, purchase a set of Bassett-Lowke scenic backcloths, which made all the difference, especially at Rasenby. The station buildings were all constructed from old cardboard boxes covered with building paper, while narrow strips of hardboard given away by the local joiner made excellent platforms when painted and edged with building paper. We used a large amount of these hardboard offcuts and found them very useful for walls, tunnel mouths, elevated roadways, etc.

Most of the houses and other buildings were constructed from Hamblings Bilteezi sheets worked in various combinations to ring the changes. These buildings were



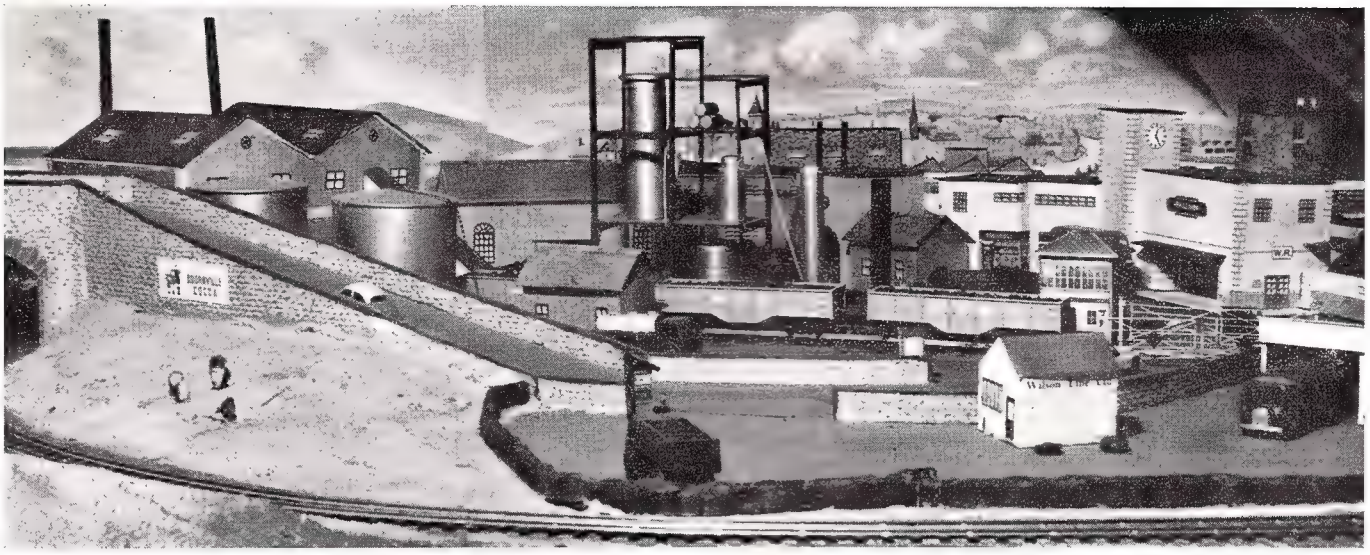
Close-up of Rasenby station with diesel car set in platform.



Part of switchboard.

strengthened internally with balsa wood and have stood up to the usual abuses very well. The engine shed and one signal box at Gainthorpe were built from Anorma kits, which, though they look very well, took more time to build than the Bilteezi, and this method of construction was abandoned because, as usual, time was always pressing.

Signals are at present non-existent on the Wold Railway, with the exception of a solitary example at the entrance to the tunnel under Rasenby on the main line. We hope in time to increase the number to the correct amount, but have decided



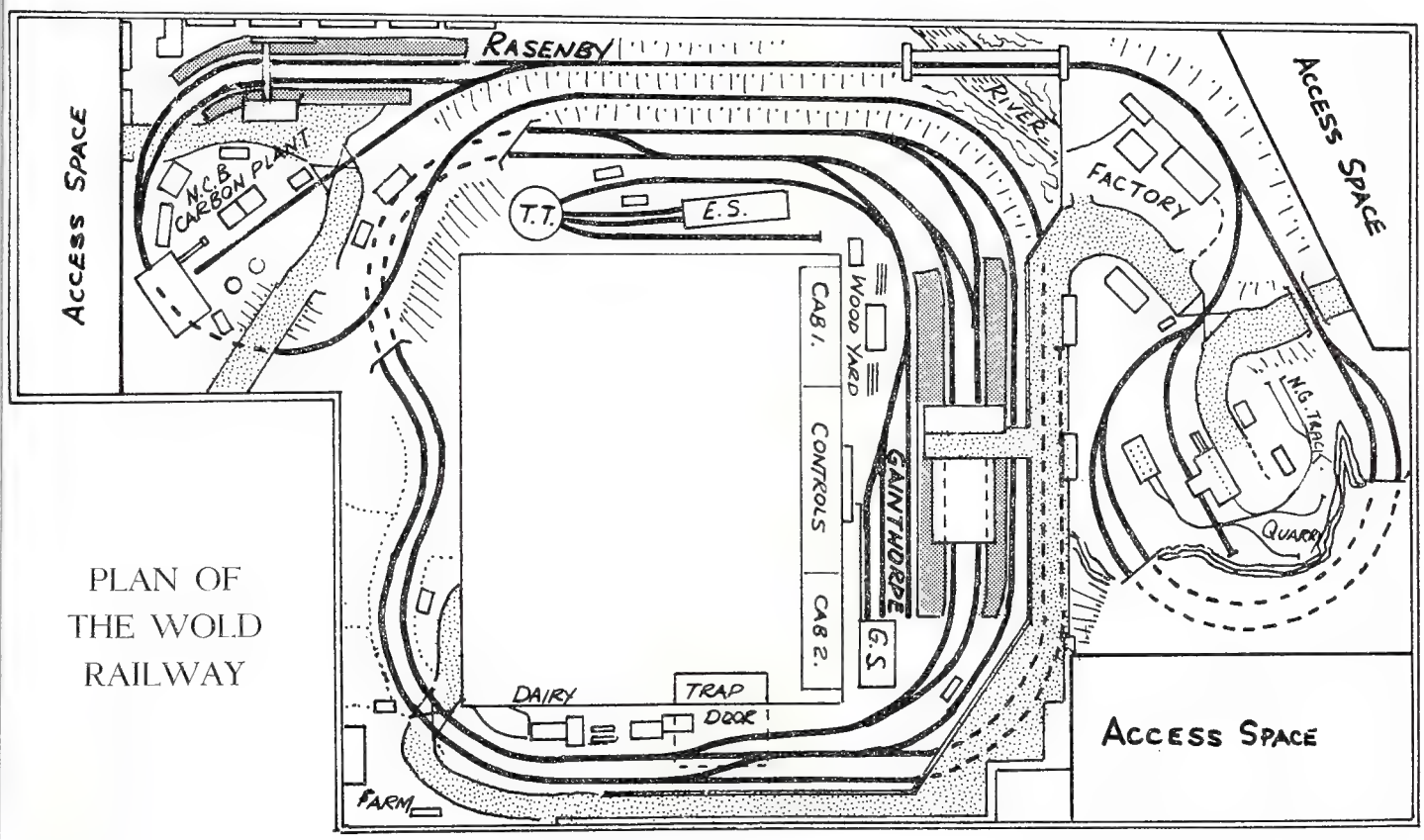
View of N.C.B. coal carbonization plant at Rasenby.

that they will have to be non-operational, as the number of wires one can fasten under a baseboard is surprisingly limited unless one likes that telephone exchange look.

Although no timetables have been made yet owing to the construction still in progress in the quarry area, operation of the layout usually takes place at least once a week. As in most mythical railway operation we connect with B.R. "somewhere round the bend," and leave it at that.

While the Wold Railway may not be the purist's idea and may drive the fine-scale enthusiast to distraction, we have built, for the price of one fine-scale super-detailed loco, a railway that gives operational satisfaction and hours of constructional pleasure; and we are glad to say that the layout still requires a vast amount of work before it can be said to be finished; but then who wants a layout that is finished? We don't.

We would like to thank Mr. Wright, who took the accompanying photographs for this article; sometimes being squeezed into almost impossible positions to do so.

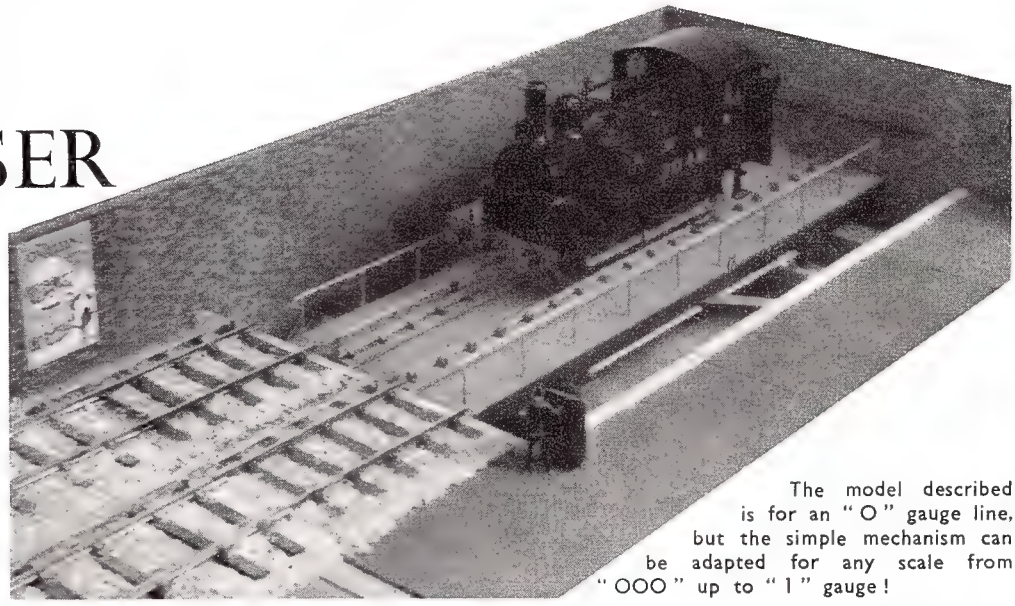


PLAN OF THE WOLD RAILWAY

DO IT YOURSELF No. 17

BUILD A TRAVERSER

by G. E. Pember



The model described is for an " O " gauge line, but the simple mechanism can be adapted for any scale from " OOO " up to " 1 " gauge !

ALTHOUGH the traverser lacks the ability of a turntable to reverse the direction of a locomotive it has been since the earliest days of railways a powerful rival of the turntable as a means of moving a vehicle from one track to another.

In a model railway the traverser can also take the place of a reversing loop and it is so used on my own layout. The reversing loop, which must inevitably take up a great deal of room, and often results in difficulties of electrical polarity as a train proceeds round it, is replaced by two or more parallel tracks terminated by a traverser, which enables an engine to run round its train and then reappear with it on the main line without any trouble electrically and with the minimum of space absorbed.

In full-size practice the motive power of a traverser is an electric motor mounted on the travelling carriage itself and supplied either by trailing cables or by contact wires and pick-ups as in a travelling crane. In the same way an " O " gauge model could be powered by a " OO " motor driving through a worm gear to give a realistically slow speed. The corresponding motive power for a " OO " traverser would be a motor as used in locos built to the 2mm. scale, but although a number of these motors have been made, and seem to work well, my impression is that they need pretty skilled maintenance to keep them in good trim and they may not develop sufficient power for this job.

The alternative method of propulsion is a stationary motor driving the carriage by an endless chain or by crank and connecting rod. This alternative appealed to me as providing a more robust job and removing the limitation on motor size. I had already located a motor complete with worm gear which seemed ideal. This was a type CM3 taken from an ex-R.A.F. flasher, as mentioned in a letter appearing in the March 1955 RAILWAY MODELLER.

My own traverser is for " OF " gauge with outside third rail, but the general method of construction and the motive power are suitable also for both " OO " and " 1 " gauges. The traverser is made as a unit, the base being a piece of 9mm. plywood, size 10½in. by 18½in. The carriage is arranged to take a single line of track, like a turntable, as suitable electrical connections overcome the risk of a loco falling into the well when the carriage is not in line with the track on which it is running. The alternative is to have a carriage with three lines of track, the centre one only being used for locos while the outside tracks, in turn, bridge the gap and prevent any vehicles being run accidentally into the well. This is the method used at Moor Street, a recess being provided under each platform to take part of the traverser as it is moved from side to side.

The rails on which the carriage runs can be made from ordinary track parts or from any convenient metal strip. As I was a bit short of rail and chairs at the time I used two lengths of brass curtain rail screwed down to wooden bearers ⅞in. wide and 1½in. deep. The depth of these settles how much of the mechanism will project below the base. It was decided that about half the mechanism should project through a hole cut with a coping saw. The electrical connections to the motor can then be made out of sight underneath the baseboard.

The carriage is made 4in. wide and 14in. long, as no very long locos will be used on the layout. Its deck is of 9mm. plywood and care was taken when selecting this to use a really flat piece, as plywood is, in my experience, subject to warping and may not always be dead flat even when first purchased. A slight amount of subsequent warping may not be disastrous in " O " gauge and may even be overcome by adjustment of the carriage wheels, but in " OO " it would be better to give the carriage a metal frame right from the start. This could be brass angle or curtain rail with a deck of *thin* plywood.

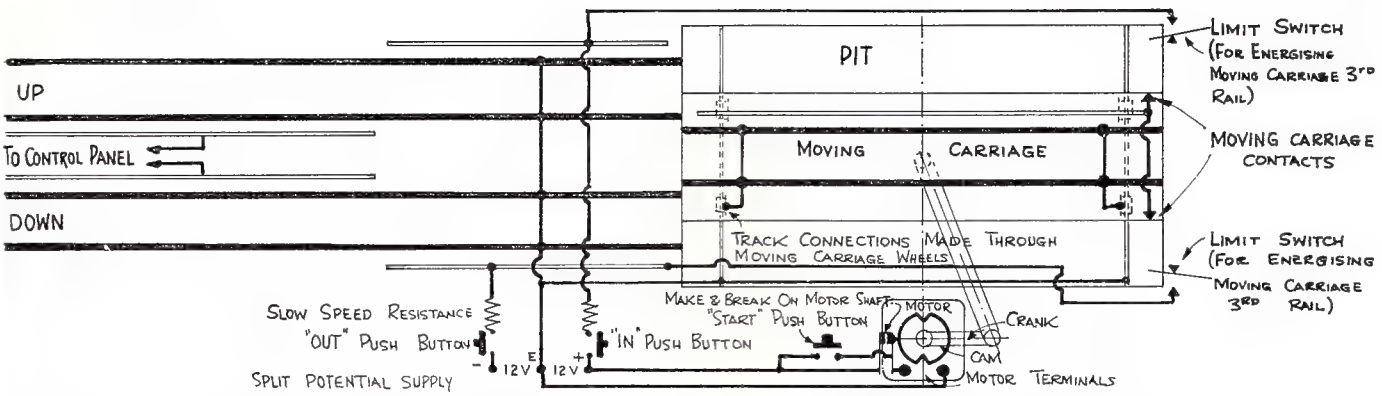
The carriage has four grooved wheels (Meccano No. 23 pulley wheels) running on the flanges of the curtain rails. To reduce possible sag when a heavy loco is on the traverser the wheels and rails are not placed at the extreme ends, as will be seen in the photographs. A further support is, however, then needed under the running rails at the end adjacent to the fixed track, to prevent tilting when locos run on and off the carriage. This is provided by two small round-headed screws screwed into the underside of the carriage and lightly bearing on a piece of curtain rail, well greased on its flange and screwed to the side of the well. In " OO " gauge the carriage wheels may well be placed at the extreme ends, as the locos are much lighter and tilt is much more to be feared than sag in this scale. A carriage one foot long should be adequate for the longest " Pacifics " in " OO " gauge.

A crank and connecting rod drive is used. The crank comprises a piece of curtain rail with flanges removed on one side screwed to a 1in. Meccano pulley wheel. The other end of the crank is drilled for a short Meccano rod, which is given extra support by a ½in. pulley wheel. The whole is soldered together and a collar is used on the rod for spacing purposes. The distance between the centres of the motor shaft and the short rod is important, as it is just half the centre-to-centre distance between the two railway tracks leading to the traverser. This means 45mm. in " O " and 25mm. in " OO " gauge for the crank throw.

A corresponding rod is fixed to the centre of the traverser carriage, using a Meccano bush wheel screwed to the underside as its support. The two rods are connected by a brass strip cut from the ever-useful curtain rail. The spacing of the holes in this strip depends on the position of the motor relative to the rear wall of the traverser and is found by measurement on the job. A 4½in. spacing with the motor shaft 8⅜in. from the rear wall are the dimensions which I used. A Meccano collar holds the strip in place on the carriage and at the other end the strip just slips over the rod on the crank so that the carriage can be removed easily for maintenance by just lifting it up.

The width of the well depends on the side travel of the carriage, so the 9mm. plywood fixed top of the traverser was not finally cut out and screwed down until the carriage and its mechanism were finished. The back and the far end are made of 4mm. plywood, forming a wall on those two sides 5½in. high.

To give automatic alignment of the carriage with the fixed tracks a make-and-

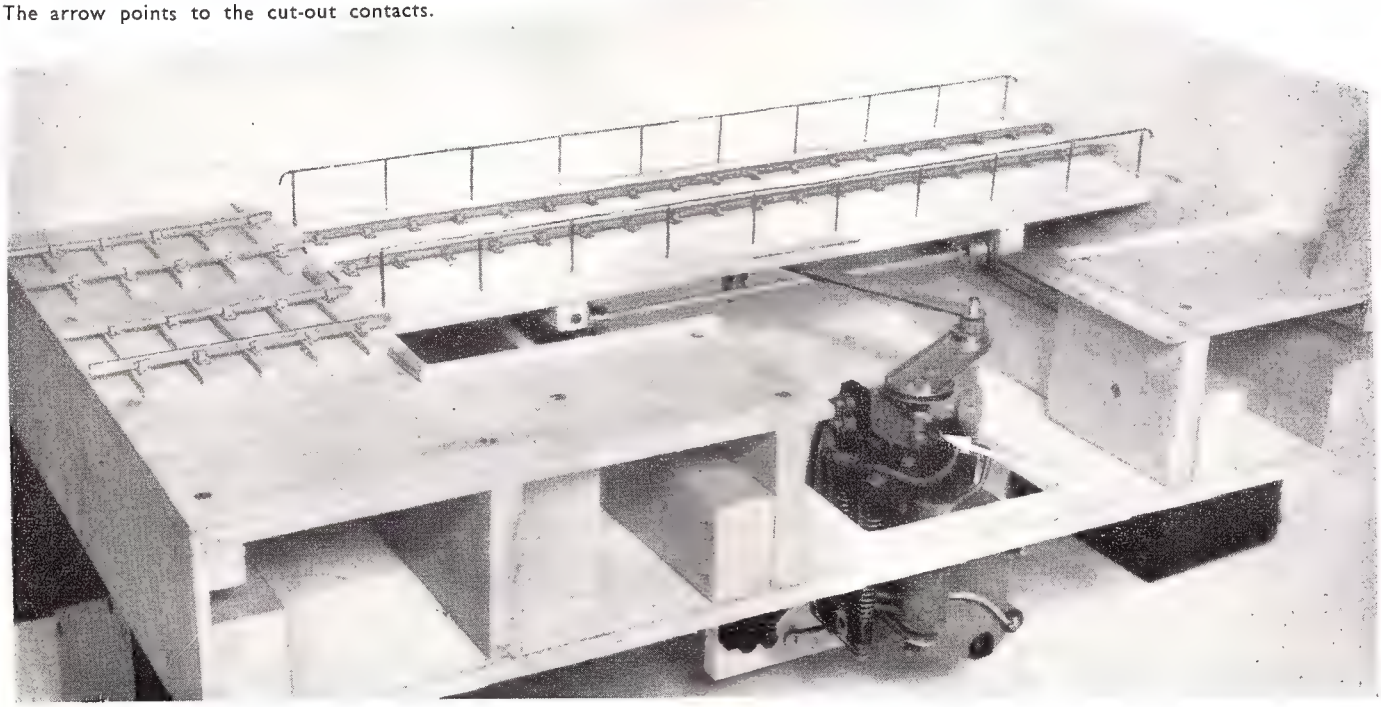


break contact is needed, driven by the motor. In the flasher unit this electrical contact is already there and it is necessary only to provide a suitable cam-operating mechanism to open and close it. This was made from a No. 63 Meccano coupling and a short length of rod. The rod was passed transversely through two of the holes in the coupling and soldered firmly in place. This, of course, blocked the lengthwise hole, which had to be cleared with a $\frac{5}{32}$in. drill, so that the coupling could be slipped on the motor shaft, which has the same diameter as Meccano rod. The two projecting ends of the rod were then rounded off and their length was carefully adjusted by filing until they just opened the spring-loaded contact twice per revolution of the motor. The instants at which this opening occurs must coincide with the two extreme positions of the carriage. The adjustment for this is obtained by altering the position of the cam on the motor shaft.

This make-and-break is then wired in series with the motor and a push-button connected in parallel with it. The carriage will come to rest automatically when it reaches the end of its travel and is restarted by momentarily pressing the push-button.

As it must not be possible to move a loco while the traverser is in motion, current is led to its third rail only when the carriage is at the end of its travel. Strip-brass contacts joined to this third rail then touch stationary spring-loaded contacts taken from old G.P.O. type relays placed at the sides of the well and connected to the fixed third rail. The running rails providing the return path for the current are connected by a short length of wire to the wheels on which the carriage runs and thence via its rails to the other side of the supply.

The type of electrical interlocks will depend on the location of the traverser and the degree of automatic working desired. If it is close to the control panel the operator's own hand may be a cheap and effective safety device to prevent accidents. With automatic couplers on the rolling stock, electrical interlocks can be designed to give remote control of the traversing operations. My own scheme lies between these two extremes, the traverser being out of sight of the main control panel, but operated by push-buttons placed close to it. The last eighteen inches of track leading to the traverser are normally "dead" and cannot be energized from the control panel. Even if a train is running flat out it is bound to be brought to rest on this section, which can be made live when required through a push-button and a resistance, which ensures that a loco can be run only slowly on to the carriage. After traversing, the loco must always run off in one direction only. If the locos approach the traverser tender or bunker first, as on my layout, this is easily arranged by having a fixed track polarity for the running-off road and using another push-button and slow-speed resistance. If locos were to approach the traverser chimney first as well it would probably be better to control their running off through the main controller, so that the polarity can be altered as required.

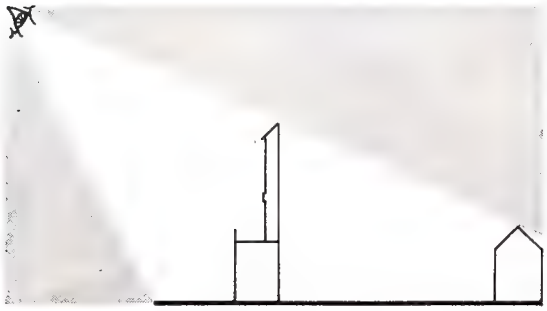


This picture shows the construction of the traverser. Note the well-braced framework. The arrow points to the cut-out contacts.

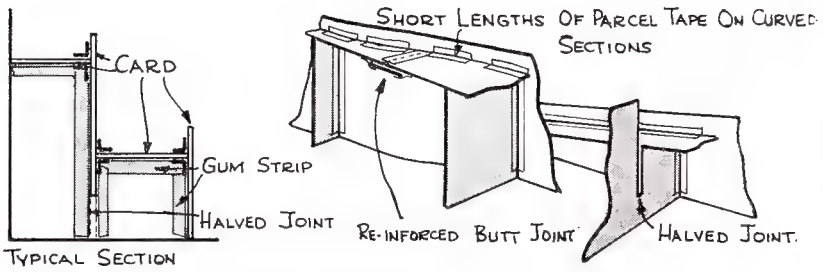
IN ALL DIRECTIONS

or what happened at Tregunna

by C. J. Freezer



A small high layout looks as big as a large low one.



Construction of high-level roadways from $\frac{1}{16}$in. millboard or card.

IT is now something over a year since I described the genesis of Tregunna, the railway in a cupboard, and in the interim several well-wishers have asked how it has been getting along. Well, up to a point things went swimmingly until—but that belongs to a later stage of the proceedings.

First of all, the layout was an overwhelming success. Despite the very cramped space (there was just one way I could get into the "operating area" when the layout was erected), I managed to get quite a lot of fun operating the layout. More than that, I had even more fun adding bits and pieces to the scenic picture, a never-ending job which neatly filled in odd time when for any reason I had ten minutes or so with nothing special to do. I just opened the door, picked up the tools and added a bit more. Indeed, when putting the little touches of life to a scene, there is nothing better than to look at the general picture with fresh eyes and add something as the inspiration strikes!

As the photographs show, the scenic details were to be found behind the tracks. Moreover, all the streets were at a high level. It is, I consider, most important to increase the height of the scenery on a narrow baseboard, as this increases the effective width. The reason for this is the fact that the eye measures angularity, not size; and, as can be seen from my sketch, a high, narrow scene subtends the same angle as a broader, shallower one. Apart from this, when the buildings have to be fairly close to the tracks, if they are not raised they will be blocked by the trains. Now although I do believe that the railway should take the foreground at all times, for, after all, that is what we are supposed to be modelling, it is pretty pointless to take a lot of trouble to build a model and then to hide it.

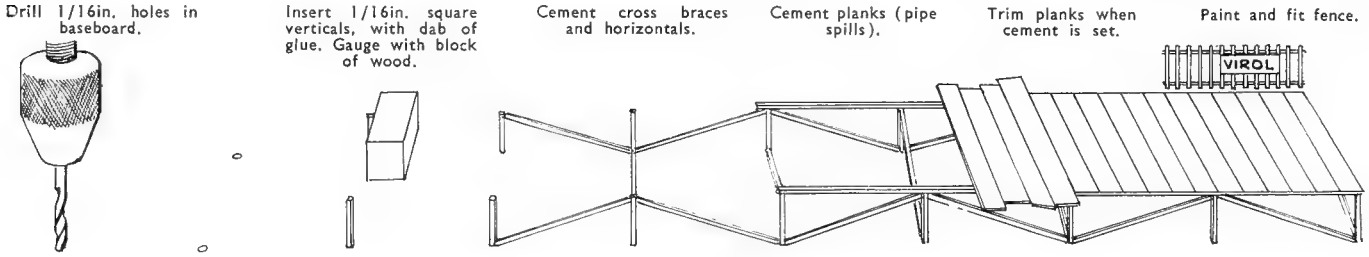
The high-level roads were built up from card, braced with more card and stuck together with parcel tape as shown in the diagram. The covering of stone paper was a quick way of finishing off the scene, for I knew that in due course the whole background would have to go. The low-relief models were, of course, in a different category altogether, as these will doubtless appear in different places as Tregunna develops.

The main platform is built from still more card, as described by Philip Barnes in January 1956, but the wooden extension, which has aroused quite a lot of interest, was "all my own work." Actually, the construction is simplicity itself, and more time is taken waiting for the cement to dry than for anything else. To save a long verbal description, I have given a perspective sketch of the method employed, showing the model in various states of construction, which I think should be easy to follow.

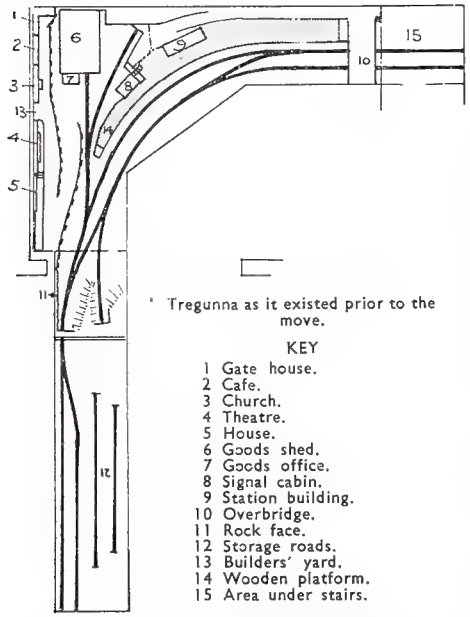
The layout was completely workable, and as it finally appeared the capacity was two locomotives, a railcar, two bogie coaches and some ten to twelve goods vehicles. I modified the portable section in practice, as I found that the "quayside line" was very difficult to work from the cramped control panel, so the line was cut short and used as a railcar siding and two unconnected lines were laid down to hold spare rolling stock. The procedure was to work the passenger train according to fairly normal practice, but to make a complete swap whenever the goods train disappeared into "Much Fiddling in the Tunnel," largely because of complaints from the operating staff, who maintained that no matter how often they sent out a particular wagon the idiots at the junction were certain to send it back on the next train!

The only snag with the line was that it was a little on the cramped side, both from the operators' point of view and from the amount of stock it could not take. If I were starting again on the same site I should certainly choose "TT" (and in addition to the finalized "OO" plan I give a "TT" version as my present recommendation for the site, based on my experience). But eighteen months ago 3mm. scale was out of the question, at least if rapid results were to be achieved.

And rapid results were needed! We only had the flat on a year's lease, and although we would have had no difficulty in extending it our intention always was to purchase a house as soon as possible. As it happened, some nine months after construc-


Drill 1/16in. holes in baseboard.
Insert 1/16in. square verticals, with dab of glue. Gauge with block of wood.
Cement cross braces and horizontals.
Cement planks (pipe spills).
Trim planks when cement is set.
Paint and fit fence.
VIROL

When the line was dismantled the scenery was far from complete. The principal railway buildings—station building, signal cabin and goods shed—were made, and the roads were laid to enable the passengers to get there—some can be seen in the lower photograph. The hand-painted backscene (oils on hardboard) was in place, and slowly low-relief buildings were going up. Gate Street, seen in the upper photograph, was virtually complete; the road disappeared off through a medieval gateway at the rear, partially screened by a Gem tree, which completely distracted the eye. Most of the buildings are Anorma low-relief kits. The theatre has not yet got a name, but, as can be seen from the cars lined up outside, the gentry have turned up in force and parked right outside! The lower shots show the timber platform. The cramped site was pretty hopeless photographically, as you could only shoot through the door.



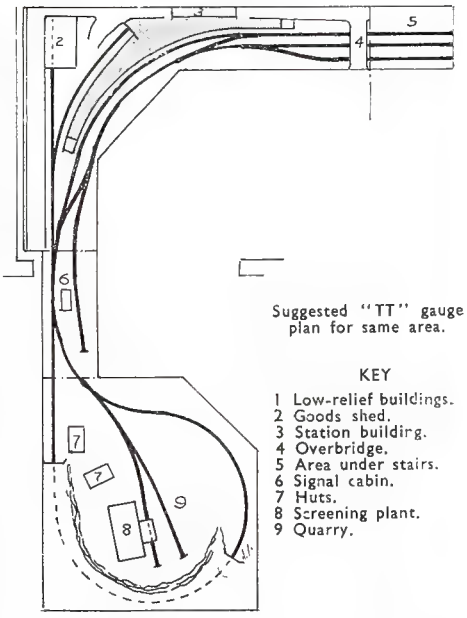
Tregunna as it existed prior to the move.

KEY

1 Gate house.
2 Cafe.
3 Church.
4 Theatre.
5 House.
6 Goods shed.
7 Goods office.
8 Signal cabin.
9 Station building.
10 Overbridge.
11 Rock face.
12 Storage roads.
13 Builders' yard.
14 Wooden platform.
15 Area under stairs.

tion began, work on the Tregunna branch came to an abrupt halt when we found a house that was neither impossible in design nor right out of our reach financially. Quite incidentally, it possessed a loft with a total clear space some 18ft. x 8ft., and as far as time permits Tregunna is being re-erected there. And so, after many years, I am possessed of an area which really allows me to lay out a reasonably lavish "OO" layout.

Had I had such a space in my early days there is no doubt that I should have designed a really involved system, with dozens of stations and tracks passing one over the other in a higgledy-piggledy fashion. Such a line, needless to add, could never have been finished to a satisfactory state by me, nor could it ever have been operated to its capacity single-handed. My actual solution was to confine my immediate attention to the area around the hatch as far as the water tank, giving me a working space some eight feet square. In this the old Tregunna has been re-erected and a new high-level station constructed on the top of the tank, access being left to allow me to reach the ball-cock in case of emergency. Another line runs off under the rising line to an eventual return loop. The present stage 1 is shown in the second of my layout plans, with a temporary reverse loop to be constructed "off" forming stage 2 as soon as stage 1 is working nicely. Stage 3 is the gradual completion of the scenic work on this area, plus the construction of more rolling stock, while various pipe dreams concerning the future extension into the rest of the loft are a source of much pleasure in odd moments.



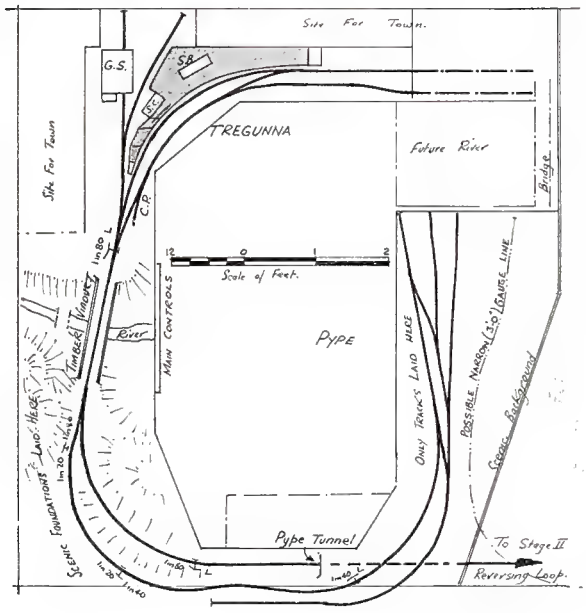
Suggested "TT" gauge plan for same area.

KEY

1 Low-relief buildings.
2 Goods shed.
3 Station building.
4 Overbridge.
5 Area under stairs.
6 Signal cabin.
7 Huts.
8 Screening plant.
9 Quarry.

Originally, as shown in the block plan, the idea was to convert the present Tregunna into a through station and then to extend to a new Tregunna with enlarged facilities, but the latest scheme, which is far more ambitious, demands that the layout be partially reconstructed and a new enlarged Tregunna built. This scheme is shown in the final partial plan, and it will be seen that one entire wall is taken up with the station and its appurtenances.

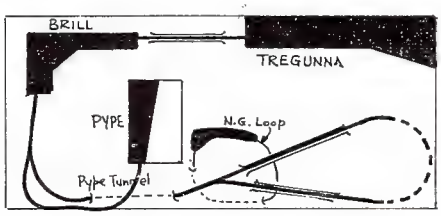
The layout is the "dumb-bell" type, which to my mind offers the finest opportunity of any for serious operation, its main disadvantage being the space it requires. But I should emphasize that this is very much a long-term plan, and to keep temptation away I shall be putting up a temporary wall blocking off that portion of the loft. The present Tregunna is quite enough for the next couple of years, and only when this section is properly completed will we think about breaking out into the wide-open spaces beyond. Indeed, if the extension remains for ever a pipe dream there is still plenty to content me. If there is one thing I have learned in this hobby it is that an over-ambitious programme takes the fun out of the game. And for me railway modelling is fun!

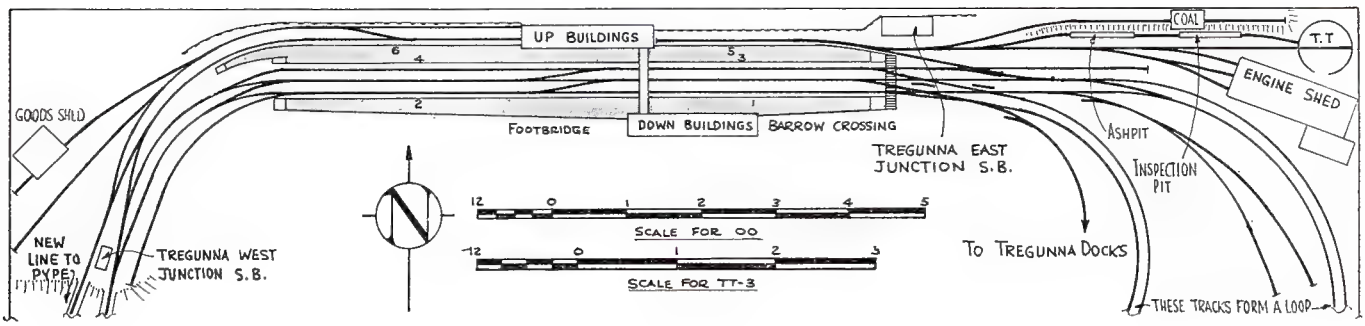


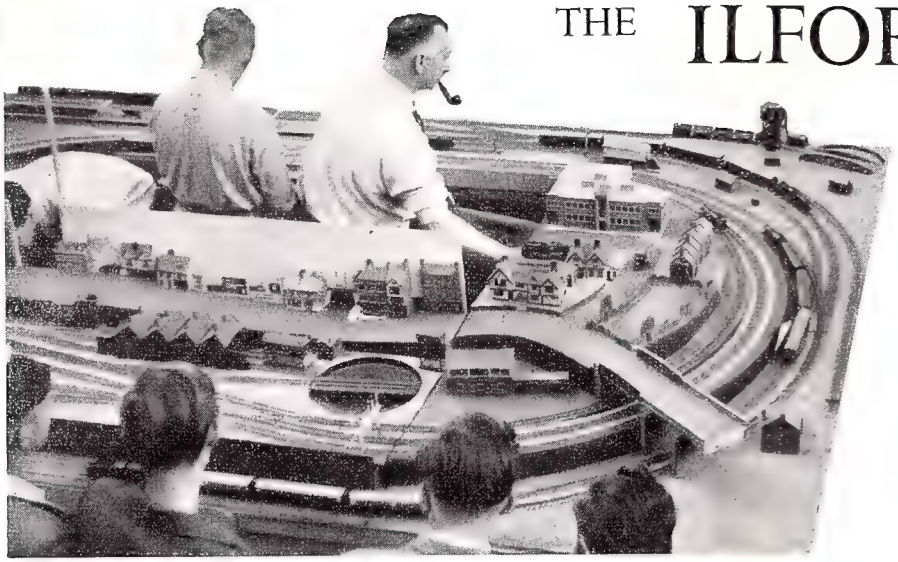
Left: the beginnings of the new Tregunna branch.

Right: block plan of possible extension into full loft area.

Below: the latest pipe dream, a most elaborate through main-line station. Reversing loops at each end give the illusion of point-to-point operation, while the provision of single track maintains interest while retaining the convenience of the continuous run.







THE ILFORD AND WEST ESSEX CLUB'S EXHIBITION LAYOUT

This layout will be on view at the club's forthcoming exhibition, to be held at the Town Hall, Ilford, on

2,ND 3RD and 4TH MAY

ABOUT three years ago the club came to the conclusion that its well-known "OO" gauge three-rail layout had seen its best days, and should be replaced. It was decided to start from scratch with an entirely new model—this time with two-rail electrification. For months long and fierce arguments raged on the most suitable track layout for a model which was primarily for our own use, the operation of which could be quickly learned, but which was spectacular enough for continuous running at exhibitions. The only unanimous point in discussions was that it should be essentially a passenger-carrying layout, completely eliminating goods working. Popular demand at exhibitions has shown that, as far as the onlooker is concerned, the exclusion of goods stock was a mistake, and the provision of a yard to accommodate goods stock is now being planned as an extension at one end.

Basically the layout is a double-main-line oval in which there are junctions connecting with two terminal stations, one of which is on a high level over part of the main line. This station has three platforms and a bay situated on a very gentle curve. The low-level station has only two platforms, but both stations have remote-controlled, electrically operated turntables, loco roads, coach sidings, and the necessary head-shunts. At each station there are lever frames controlling points and signals, which are interlocked with the power supply to prevent movement of trains conflicting with the setting of points or signals. Operation is by bowden-type cables with a self-adjusting device. The double junctions are separately operated.

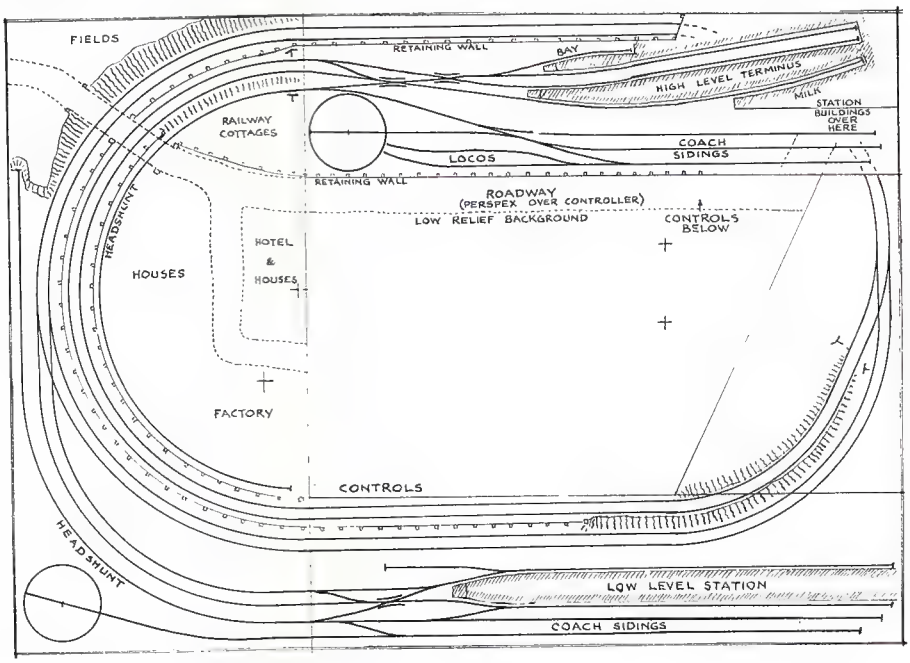
The whole layout is made up on four baseboards, the sections fitting together with dowels and wing-nuts and bolts, giving an overall size of 12ft. by 8ft. 6in. The detachable legs fit into metal sockets under, and inside, the base frames, and are held rigid by metal bar braces, also detachable. The joints in the baseboard are bridged by short lengths of track, about nine inches long, under which are fixed four press-studs such as are used by dressmakers, two at each end. The corresponding halves of these fasteners are built into the baseboards and wired up to the power supply. Insertion of these "jumpers" is instantaneous, ensures accurate alignment of track, provides current supply, and minimizes any small irregularity in the floor level.

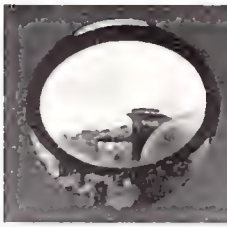
Scenic work is still under construction, and includes earthworks, bridging, tunnelling, and an assortment of full and relief model buildings. The club owns most of the locos and rolling stock used for exhibitions. Most of the locos are rewheeled models which were built during the latter days of the old three-rail layout, while several rakes of coaching stock are recent Tri-ang models to which scale bogies and wheels have been fitted.

The opening ceremony of the second exhibition is to be performed by Lord Brabazon of Tara, supported by Lord Northest, both of whom are model railway enthusiasts when they have the time to spare from other things. The Mayor of Ilford will take the chair at the opening.

The big "OO" layout will be on show, of course, with the slight modifications in track and scenery since its last appearance, but there will also be two "small-space" layouts by club members, showing the possibilities of both hand-made and commercial models, fitted into odd corners. One of these operates normally in a bedroom, while the other is run on a living-room floor. Those interested in "O" gauge "EM" gauge models will find stands showing these, and constructional ideas and methods will be exhibited. Scenery buildings are quite easy to make, and simple jigs and the various kit systems will be on display.

The hours of opening will be from 3 to 9 p.m. on May 2 and 3, and from 10 a.m. to 9 p.m. on May 4.





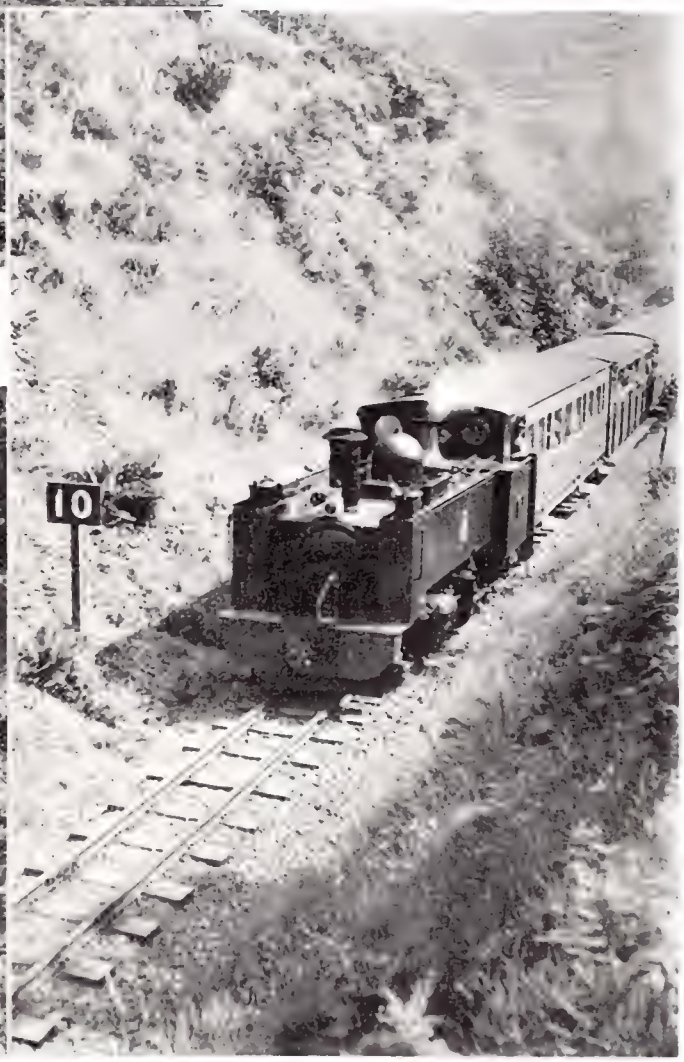
THE NARROW GAUGE LOOK

by Rick Green

As the narrow-gauge train winds its way up the valley it is at times on a narrow ledge, at times in a cutting scarcely wider than itself, and at others it passes through undergrowth so close as to brush the carriage sides. This is the narrow-gauge look.

Part 1
INTRODUCTION

INTEREST IN NARROW GAUGE MODELLING HAS BEEN GROWING STEADILY SINCE THE WAR, WHILE TO SOME EXTENT THE DECLINE OF THE NARROW GAUGE PROTOTYPE HAS CEASED, MAINLY DUE TO THE MAGNIFICENT EFFORTS OF FIRST THE TALYLLYN RAILWAY PRESERVATION SOCIETY AND LATER THE FESTINIOG RAILWAY PRESERVATION SOCIETY, WHICH IN THEIR TURN HAVE LED THE



WESTERN REGION TO EXPLOIT THE VALE OF RHEIDOL. WE CONFIDENTLY EXPECT THAT THE INTRODUCTION OF 12MM. GAUGE WILL HELP FOSTER THE NARROW GAUGE MODEL RAILWAY, FOR THE ADDITION OF A 3FT. GAUGE FEEDER TO A 4MM. SCALE LAYOUT IS NOW A RELATIVELY SIMPLE MATTER—INDEED, AS THE WHEEL STANDARDS ARE VIRTUALLY IDENTICAL, EVEN MIXED GAUGE TRACK IS PERFECTLY PRACTICABLE.

HOWEVER, A NARROW GAUGE RAILWAY IS NOT JUST A SMALL LINE, BUT SOMETHING WITH AN IDIOM OF ITS OWN—THE NARROW GAUGE LOOK. THIS SHORT SERIES OF ARTICLES, ILLUSTRATED BY PHOTOGRAPHS OF THE VALE OF RHEIDOL, HAS BEEN PREPARED TO ENABLE MODELLERS TO GIVE THEIR LINE THE AUTHENTIC TOUCH.

DURING the course of my inquiries into the whys and wherefores of the Cambrian Railways I have accumulated information on its two-foot adjunct the Vale of Rheidol Light Railway which may be of use to other prospective narrow-gauge modellers less fortunate than myself in being able to visit and inspect at leisure. Much of the track is difficult of access, except by the train itself, and the signing of a form and the granting of an official permit are essential, as too are sound hearing and observation and the ability to move up or down rapidly, as in many places there is room for the train only.

These articles will consist of a series of photographs accompanied by observations and enough dimensions from which to make models of acceptable appearance of the various types of edge-of-track scenery and buildings and equipment and to place the latter at the correct distance from the track, all very important in getting the "narrow-gauge look" instead of the "attenuated-standard-gauge look."

The first articles will be generalizations intended to set the scene, and then I will deal with individual features and their dimensions. All distance and clearance measurements will be "from gauge," i.e. from the inner edge of the nearer of the two rails. For the present the articles will be confined to the line as it exists today.

Readers who wish to look up the history may readily do so in *Narrow Gauge Rails in Mid Wales,* by J. I. C. Boyd, or if they can borrow a copy, for it is now out of print, there is *The Vale of Rheidol Railway,* an excellently detailed booklet by Lewis Cozens, who has gone very thoroughly into the working of the line.

Further, if any reader has any particular items or aspect in mind and would wish them to be included he should write to our Editor and if he is in agreement I will do my best to cover it.

To conclude this foreword I would like to express my appreciation and thanks to the Public Relations and Publicity Officer, Western Region, British Railways, to Mr. Lewis Hamer, the stationmaster, Aberystwyth, and to the Vale of Rheidol trainmen themselves, all of whom have helped to make my "photographic survey" possible.

WHY NARROW GAUGE?

Robert Fairlie had no doubts at all as to the question which this heading asks. He set it out at great length in his *The Battle of the Gauges Renewed,* or *Railways or No Railways?* in his somewhat heavy Victorian style, and the true answer was to be sought in economics, an interesting subject which has been spoilt by too many dull books. Incidentally, Fairlie's motives for writing his book were very laudable by quite modern standards—he was plugging the three-foot gauge for overseas markets—and with much success, as we have since seen.

Briefly, in a hill and mountain district where the standard gauge required costly engineering works which the income from expected traffic would not cover the solution in pre-road-motor days lay in the narrow-gauge line hugging the hillsides in a series of closely linked curves. The savings in construction and maintenance were enormous for simple reasons.

The excavation required to construct the ledge in the hillside increased out of all proportion to the gain in the width of the rolling stock as each extra foot-wide slice was cut away. The square of the width of the stock, say 6 squared to 8 squared, is probably quite a moderate estimate. Further structural savings became possible because the individual axle weights were at least halved as against the standard-gauge stock of the period. Finally, the tight curves which a narrow-gauge train could negotiate meant that the line could stick more closely to the hillside and avoid expensive viaducts for bridging the small side valleys.

These photographs will help to bring out more clearly than I can write the essential characteristics which this need for economy has stamped upon the upper section of the Vale of Rheidol Light Railway and which should therefore be reproduced in a narrow-gauge model layout of this type.

The clean ballasted and drained way in the bottom of the cutting is scarcely more than eight feet wide on an average, little or nothing to spare over the overall width of the stock, which is set low on its two-foot track (1ft. 11½in. nominal) and overhangs a full track's width on either side without counting the step boards. The train fits neatly into the bottom of the cutting and fans the grass and flowers back in great waves as it passes and swings away and out on to a curving ledge section.

Part two will appear in July

THE STORY OF TWO "BULLDOGS"

by A. S. Taylor

Drawings by Eric Longbottom

Being the detailed description of the construction of a super-detailed prize-winning pair of 4mm. scale models.

(continued from page 89, April issue)

THE TENDER

We now turn to the second half of the task, namely the tender. From photographs I have seen, it would appear that the "Bulldogs" were variously equipped with either a 3,000- or a 3,500-gallon tender. We felt, however, that the former was more in keeping with what, after all, is quite a small locomotive, and construction of the 3,000-gallon type was therefore put in hand. Once again we decided to split the work into two main parts: an internal chassis carrying brake gear, vacuum cylinder and rocker shaft, and the body itself with all the relevant details plus the sideframes fitted with dummy axleguards.

In addition to these there were the couplings and vacuum tank, which were attached as separate items.

THE INTERNAL CHASSIS

We felt it would be an advantage to have a separate and detachable chassis, since not only would this allow the wheels to run in phosphor-bronze bearings, but the brakegear could be more readily attached and the whole unit treated as a separate item for painting. It consists of two identical sideframes, cut out and drilled together and separated in the usual way by spacers and 10 B.A. bolts. Phosphor-bronze bushes were fitted into the axle holes and Romford 16mm. tender wheels employed, these being bushed with plastic knitting needle "top hat" bushes, as with the locomotive bogie, and equipped with axles of $\frac{1}{8}$in. mild steel, the ends being suitably turned down to force tightly into the bushed wheels.

THE BRAKE GEAR

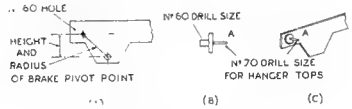
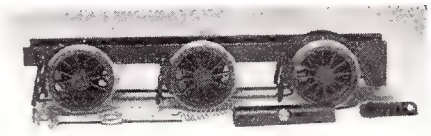


Fig. 31. Brake hangers.

When marking out the sideframes, the positions of the top pivot point of the six brake hangers had been carefully located and suitable No. 60 drill holes made. Six small turnings were now produced and soldered into position in the No. 60 holes in the sideframes. The protrusion "A" was, of course, to accommodate the top of the brake hanger, while the centre portion of the turning, the exact diameter of which is not important, acts also as a shoulder against the outside of the frame.



The complete tender chassis.

The brake hangers were constructed by first soldering together six narrow strips of nickel silver. These were then drilled No. 70 in the three holes required for the pivot point, brake shoe itself and push rodding respectively, finally being filed to the correct shape before separation with a razor blade and subsequent cleaning up.

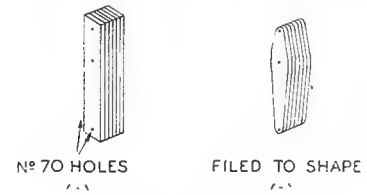


Fig. 32. Brake hangers.

The brake shoes were marked out on a sheet of 16 s.w.g. brass (coated with marking blue) in the following manner. A circle having a radius of approximately 1mm. greater than that of the wheel treads was first scribed out. This was to represent the working surface of the shoe. A second circle with a radius equal to the distance from the wheel centre to the brake shoe pivot point was next drawn in and six No. 70 holes were drilled around the perimeter, the holes being so spaced as to allow ample room for plotting in the brake shoes.

The outline of these was then marked in and the six shoes were cut out. The shoes were now attached to the hangers with a lillpin passing through the centre hole in the latter, soldered securely at the rear and the excess of pin cut off and filed away. There are, of course, three right and three left shoe and hanger units. It is easy to forget this and to make up six of the one variety, as I know to my cost!

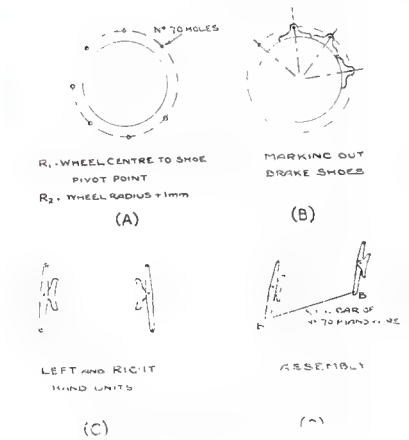


Fig. 33. Brake shoes.

The units were now placed in position on the No. 70 projections, utilizing the top hole of the hangers, and a tie-bar of No. 70 piano wire was passed through the bottom holes in each opposing pair. This ran at 90° to the sideframes and connected each pair of shoes. Solder was applied at the point B in each case. It now became possible to adjust each pair of shoes for correct working distance from the wheel treads, since the projections acted as pivots. Once adjusted, a touch of solder on these pivot points locked the brakes securely in the *off* position. Push rods made from the same No. 70 piano wire were soldered on at right-angles to the tie-bars, each intersection being sweated together. The result was a firm and rigid brake gear that will stand up to hard usage, thanks to the toughness of the piano wire.

We did, in fact, fit a dummy rocker shaft at the front end of the chassis, but since many people may consider this an unnecessary refinement I will not describe it in detail. For those interested I am, however, including a photograph showing the front, actually of a 3,500-gallon tender by J. S. Beeson, in which the brake cylinder and rocker shaft are clearly depicted.

The chassis photograph also shows the two couplings and the vacuum tank. The rear coupling has a hook bent from nickel-silver strip to mate with the Peco-Simplex types, and the spring at the rear ensures an automatic return to the central position

while allowing lateral movement during the moment of coupling. The coupling pivots round a shouldered 8 B.A. screw through the hole visible in the centre of it, the screw passing up into a tapped hole in the floor of the tender body, while the spring is kept under tension by being looped round a 10 B.A. bolt that also passes into the tender floor.

The vacuum tank is a simple brass turning with indented ends and has a central hole at right-angles to its length through which is passed a long 10 B.A. screw. This also screws through into the tender floor, the tank resting against two concave supports that are, in fact, attached to the tender body.

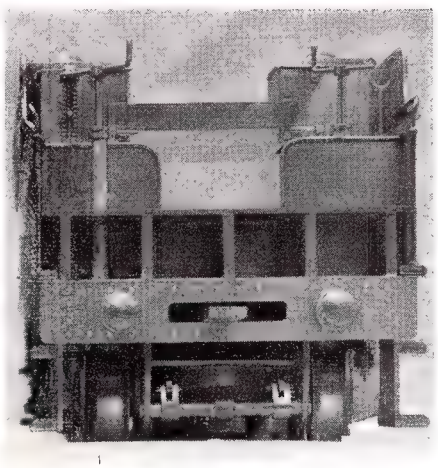
THE TENDER BODY

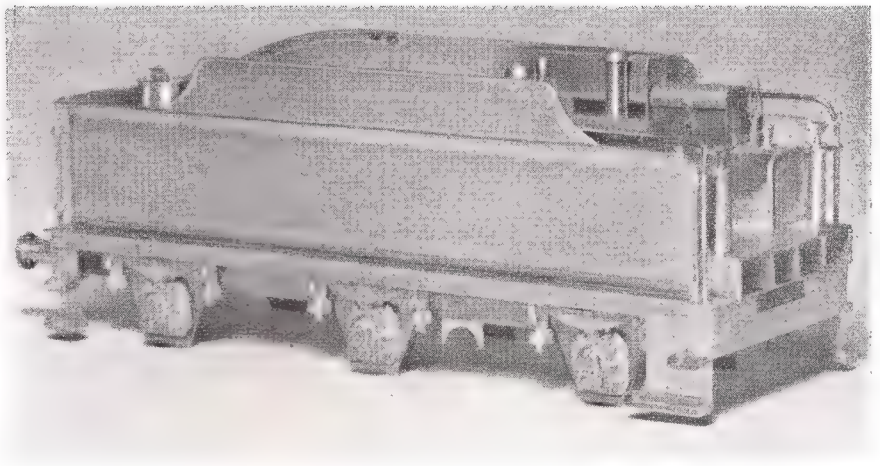
This is, of course, a major item, although not posing as many problems as the locomotive.

A start was made with the footplate and six slots were cut therein to allow for the slight protrusion of the tender wheels into the body. Runners, buffer-beams and drag-beams, the latter two items being riveted where required, were now soldered in position, bracing the footplate in the process. The side members to carry the dummy axle-boxes and springs were cut out as a pair and drilled to take the projecting lugs on the backs of the axle-box castings. These axle-guards were again Beeson products, and very fine castings they are. The lug of each box was pressed into the receiving hole in the sideframe and was touch soldered at the rear, since the boxes were to act as dummies. In soldering these white-metal castings to harder metals such as brass or nickel silver, I find that it is a good plan to use a fairly hot iron and to place this on the metal very close to, but not quite touching, the casting, which has previously been well brushed with flux. In this way a quick soldered joint, one might almost say a fusion, can be obtained without detriment to the visible portion of the axleguard on the outside.

The sideframes were now soldered on to the footplate and the two vertical concave supports for the vacuum tank attached to them. The addition of turned buffers and steps completed the tender base, apart from the vacuum pipe added right at the end of the construction.

"OO" G.W.R. tender front by J. S. Beeson.





The complete tender body.

To deal with the body proper, we decided to form the *inside* portion first, subsequently adding the main side and end sheeting. The sequence of assembly of this "*coal plate unit*" was as follows:

(i) The coal plate "A" was first sawn to size and a rectangle cut out of the front portion to provide the coal well. The rear corners of this plate were lightly rounded with a file to the blueprint shape, and the riveting was carried out at the far end.

(ii) The necessary holes to take the shanks of the water pick-up dome, tank filler, tenders, vent pipes, water gauge, tool boxes and the like were marked in on this plate and No. 70 pilot holes made in every case. These were later opened out to match the shanks of the actual turnings when the time was ripe to fit these. It is far easier to do this preliminary marking out and pilot drilling in the flat than to endeavour to carry it out when the body is assembled.

(iii) Two identical coal well sides B and B^1 were now soldered in position, these being of the right height to maintain the coal plates at the correct distance above the footplate. A good fillet of solder was run behind the joints to give plenty of strength.

(iv) A sloping plate C was next soldered between the two sideplates B and B^1. Soldering here was from underneath, and again a good strong fillet was left.

(v) The two front cover plates D and D^1 were now fixed over the open ends of A and B and A and B^1 respectively. Beading was applied to these cover plates in the form of a thin nickel-silver strip bent round them to shape, soldered and cleaned up before their attachment to the open ends.

(vi) The division plate E was beaded in the same way and riveted. Thereafter it was sweated into position laterally across the tender. This plate was of identical width to the coal plate A.

(vii) A supporting plate F, similar in height to B and B^1, was then fixed under the rear of the coal plate, thus maintaining the whole structure on a level keel.

(viii) The actual platform at the front of the tender is raised above the footplate itself and is in fact supported by five vertical members. The platform consists of a metal top G, to which five strips of nickel silver H are soldered vertically on the underside (obviously these must be of an even height, and they can best be cut from one long strip, thus ensuring equality). J and J^1 represent two holes through which the brake and water pick-up standards pass, these items actually being soldered on to the footplate below. The holes were of sufficient size to allow the collar K at the top of each standard to pass through them, thus enabling the platform to drop over the standards after they had been attached to the footplate itself, but before the wire handles L were inserted.

(ix) We were now in a position to unite the platform with the main assembly A-F, thus completing the internal structure except for the fittings and the two vertical plates behind the tool boxes. These were to be added after the main sheeting had been attached, since their absence at this stage assisted both the soldering together and subsequent cleaning up.

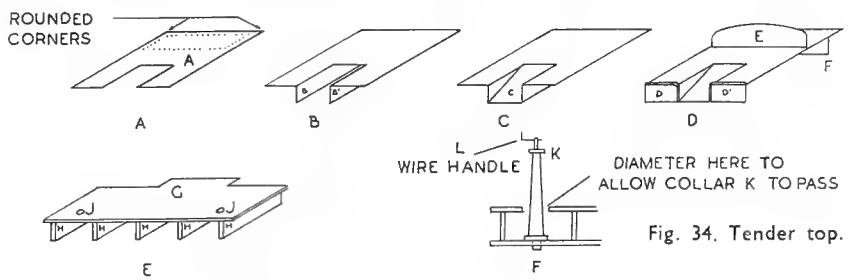
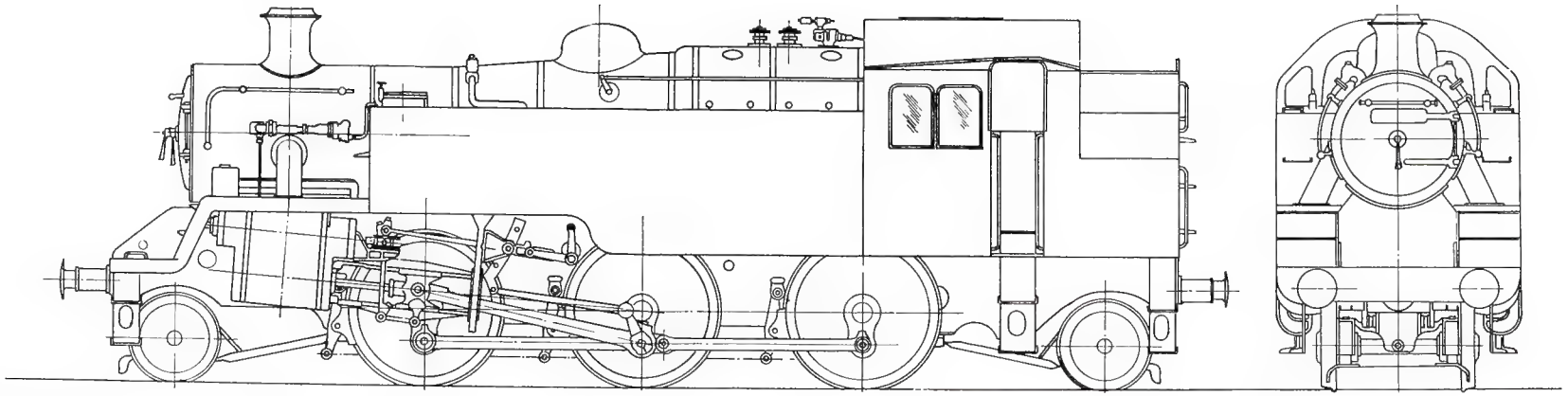
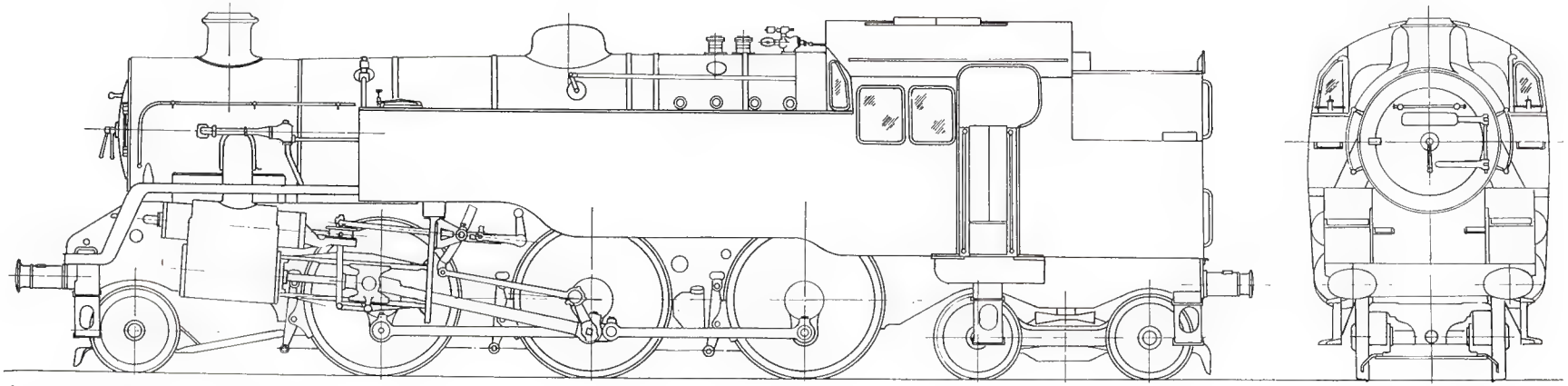


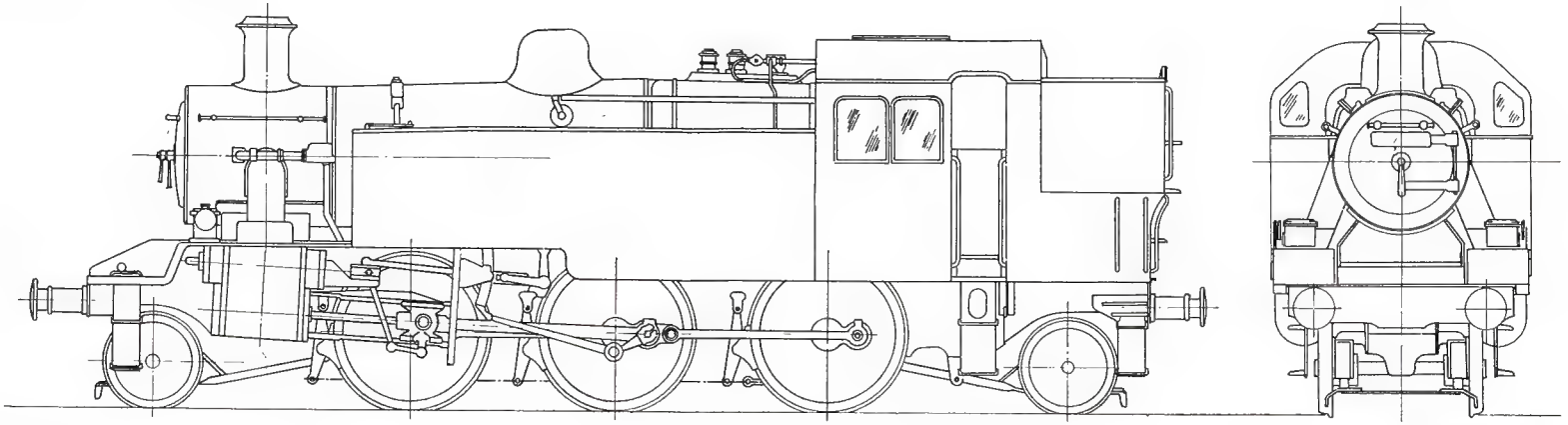
Fig. 34. Tender top.



B.R. CLASS 3 2-6-2T.



B.R. CLASS 4 2-6-4T.

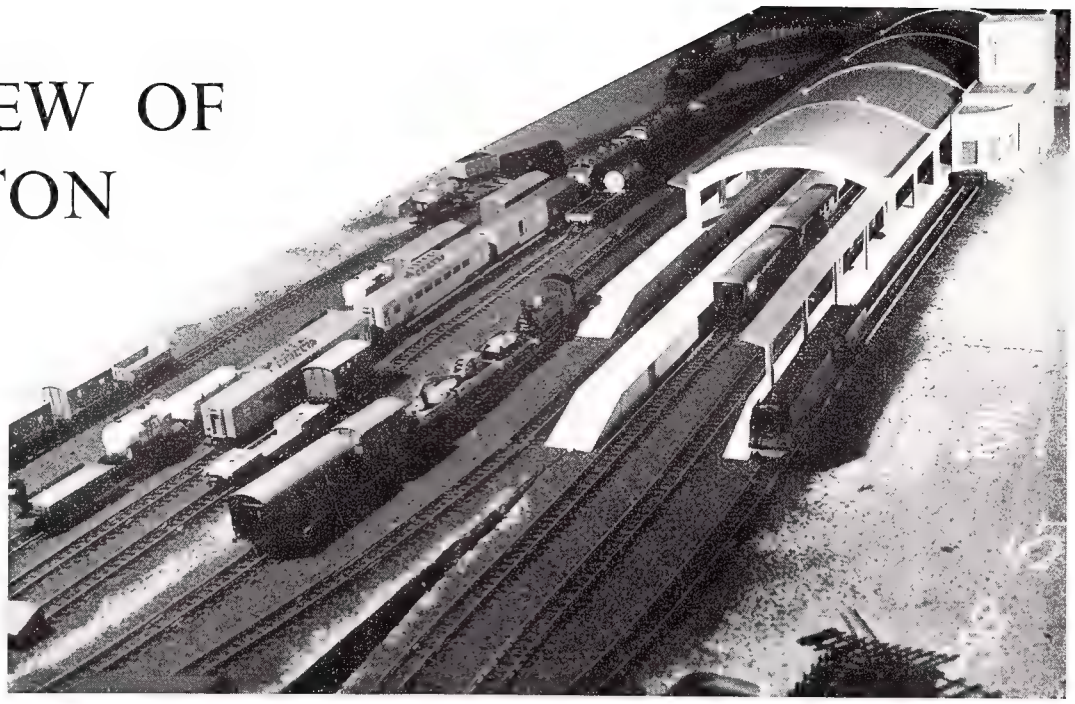


B.R. CLASS 2 2-6-2T.

All drawings 4mm. = 1 foot.

PECO TOPICS

A PREVIEW OF THE ALTON GRANGE LAYOUT



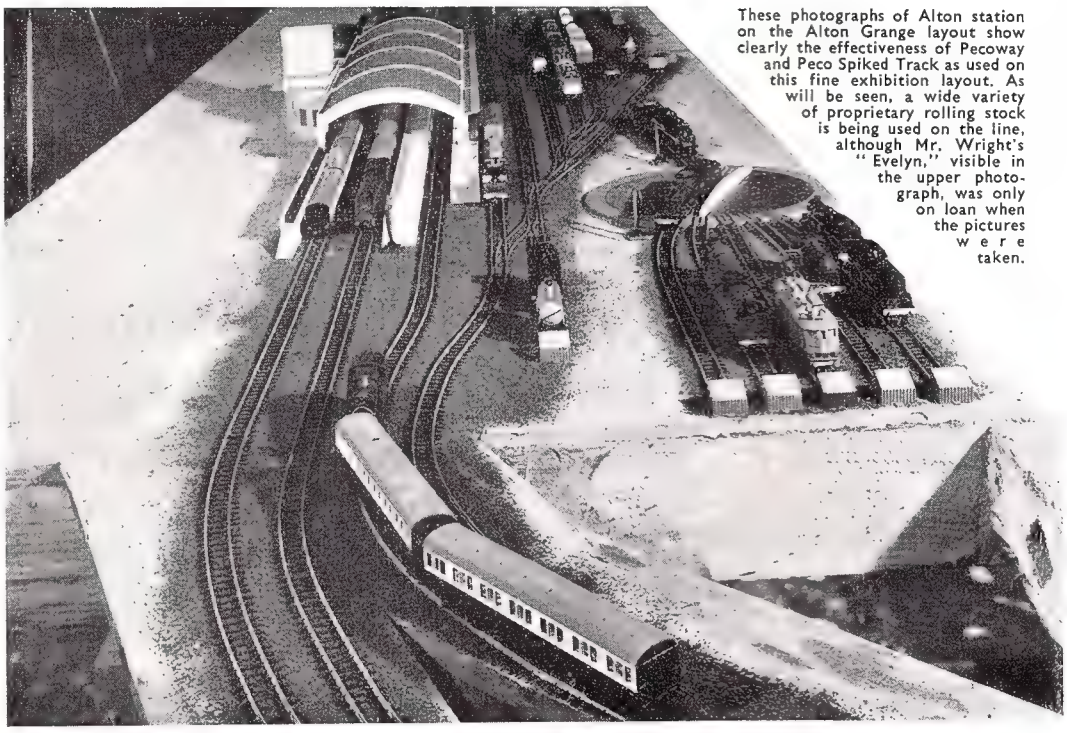
THE accompanying photographs show the early stages of the exhibition railway now being erected at Alton Grange, near Uttoxeter. We shall be describing the railway more fully later this year, when it is complete and open to the public, which we understand will be about July. In the meantime we are publishing these illustrations of the main station as an advance announcement, as you may care to plan your holiday with a view to visiting the line.

The layout is being constructed under the direction of Alan Wright, whose work needs no introduction to regular readers. As can be seen, this layout is a far cry from the diminutive Wright Lines, yet basically the construction follows an identical pattern—a stout frame covered with softboard on which the ballast and then the track are laid.

The track itself is the popular Pecoway, points being made from the new Universal "OO" Point Packs. The illustrations clearly show the realism that scale track provides, and in choosing this permanent way the proprietors had in mind the need for reliable operation over a realistic Universal track.

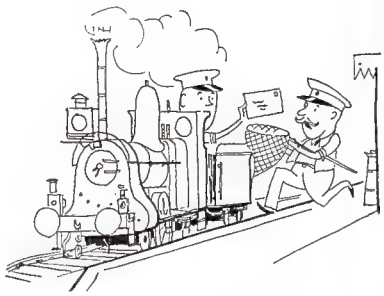
It will also be seen that the stations are laid on a softboard base, as recommended. However, a considerable variation has taken place with the framework, for in place of our 2in. x 1in. massive timbers have been used. Indeed, from a close inspection we would hazard the guess that the framework utilizes a selection of old rafters and floor planks. The supports are equally massive, being 9in. square brick pillars; in fact, the whole construction is massive and solid, as it must be on so large a layout, which must perforce work with the minimum of attention for hours on end.

We have emphasized this aspect of the railway, for it does bring home the vital importance of a sound baseboard. While the amateur will rarely go as far as this—indeed, it would be most ill advised if the layout were situated on an upper floor, as the average house is not built to take such loads—the Alton Grange layout illustrates and underlines the importance of a sound, firm baseboard as the foundation of a perfect model railway.



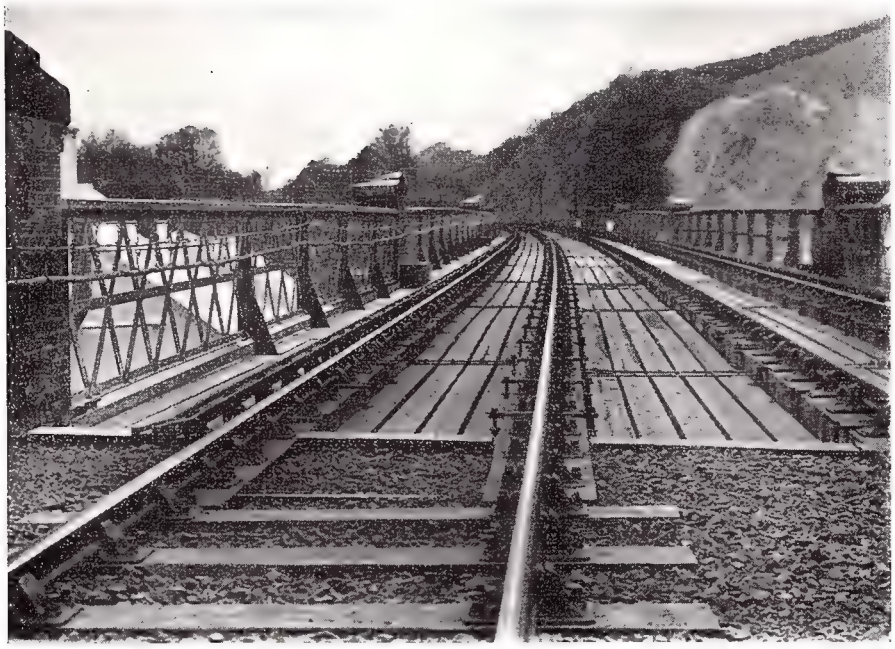
These photographs of Alton station on the Alton Grange layout show clearly the effectiveness of Pecoway and Peco Spiked Track as used on this fine exhibition layout. As will be seen, a wide variety of proprietary rolling stock is being used on the line, although Mr. Wright's "Evelyn," visible in the upper photograph, was only on loan when the pictures were taken.

READERS' LETTERS



A free-for-all forum of ideas and opinion.

TRACKLAYING ON VIADUCTS



For meticulous modellers only : this photo shows how viaduct decks should look !

I thought the accompanying photograph might be of interest to readers. It shows a method of laying track on a steel viaduct. The rails are laid on longitudinal waybeams, with guard rails outside the outer rail and timber decking.

Warlingham. E. B. TROTTER.

"BEDDGELERT"

With regard to Mr. L. H. Emery's letter in the February issue of the RAILWAY MODELLER concerning the N.W.N.G.R. loco "Beddgelert," I have examined a number of photographs, and, although I was unable to find a "head-on" view, one in the October 1941 issue of the *Railway Magazine* suggested that both front and rear spectacle were rectangular. The front spectacles of "Moch Tryfan" and "Snowdon Ranger" were also rectangular, although those of "Russel" and "Gowrie" were round.

J. B. SCRULEY.

Dulwich, S.E.21.

WEST SOMERSET MINERAL RAILWAY

It was with great pleasure that I read the letter on the West Somerset Mineral Railway in your March issue.

The following data are obtained from R. W. Kinder's *Light Railway Handbooks* Nos. 4 and 8.

Opened by the Brendon Hill Ore Company for goods on September 28, 1859; taken over by Ebbw Vale Steel, Iron and Coal Company 1864; opened for passengers on September 4, 1865; closed entirely on November 7, 1898; reopened for mineral traffic Watchet—Brendon on July 4, 1907, by Somerset Mineral Syndicate; closed in 1909; Watchet—Washford section used in 1911 for signalling experiments by A. R. Angus Ltd.; land sold on August 8, 1924.

Permission to open the stations above Coombe Row (bottom of half-mile 1-in-4 cable incline) was refused, but passengers were conveyed at their own risk as far as Brendon.

There is in Handbook No. 4 a map showing the route of the railway, and in the front is a photograph of a train at the base of the incline. This photograph is owned by the Railway Club. There is also a photograph looking down the incline as it is today. In the book *Garden Railway*, by R. E. Turtin, is a photograph of an 0-6-0 saddle tank "Hecla," on a train of four-wheelers. This loco resembles the 1865 0-6-0 saddle tanks of the W.S.M.R. Whether there is any connection I do not know.

Coaches : four four-wheelers (three sold in 1898, one left derelict).

Track : flat-bottom with light chairs, 70lb. per yard; spiked straight to sleepers on incline; maximum gradient 1 in 43.

Signalling : disc and crossbar type.

Journey time : thirty minutes Watchet—Coombe Row.

Locomotives : three Neilson 0-4-0 saddle tanks, built 1854-61. "Esperenza" (no information). "Rowcliffe" : 0-6-0 saddle tank, Sharp Stewart, built 1857. "Brendon" : 0-6-0 saddle tank, Sharp Stewart, built 1857. "Atlas" : 0-6-0 saddle tank, Sharp Stewart, built 1865. "Pontypool" : 0-6-0 saddle tank, Sharp Stewart, built 1865.

There is a sketch of the locos built in 1887 and 1865 in Handbook No. 4.

The last was the only loco in service when the line closed, and was returned to South Wales. The coaches were left at Watchet.

When reopened in 1907 the loco was a 4-4-0 tank ex-Metropolitan Railway, No. 37.

The details of the 0-6-0 saddle tank locos built in 1857 are as follows : built by Sharp Stewart at a gauge of 4ft. 8½in.; driving wheels were 4ft. 6in. with a wheelbase of 13ft. 6in.; cylinders at 16in. x 24in.; total heating surface 824 sq. ft.; tank capacity 500 gals. The 0-6-0 saddle tank locos built in 1865 by Sharp Stewart were to a gauge of 4ft. 8½in.; driving wheels 4ft. 7in.; cylinder 17in. x 24in.; total heating surface 1,194 sq. ft.; tank capacity 750 gals.; bunker capacity 10cwt.; weight in working order 36 tons.

The stations were Watchet, Washford, Torre Siding, Roadwater, Coombe Row, then the cable incline for half a mile, Brendon, Langham Hill, Gupworthy.

Mr. Moore will find articles in volumes 49 and 79, pages 151 and 320, of the *Railway Magazine* and volumes 20 and 30, pages 196 and 389, of *The Locomotive*.

I wish Mr. Moore the very best of luck in modelling this railway, as it certainly has the character of a pre-grouping railway in every way.

M. N. A. RAYNER (aged 13).

Penzance.

Mr. Roche is quite right in that the wagon strapping appears to form I's. The letters are B.C.W.W., standing for Birmingham Corporation Water Works from whom the W.S.M. bought them. (The Birmingham-owned Elan Valley branch of the Cambrian was being broken up from 1907.)

Birmingham used them as gang wagons with seats and climbing ladders, and while

I had been able to trace an old gentleman who thought they were "some sort of yellow so we could see them in the dark" I was delighted to read of Mr. Roche's confirmation of mustard colour.

I have photographs of the workmen in their Sunday best sitting in the wagons at the stone-laying ceremony for one of the dams (1897), and first-rate period costume pieces they are. At the moment they are out on loan, but when they come back I can send them to the RAILWAY MODELLER if our Editor thinks they will be of sufficient general interest.

They are probably ex-Cambrian and even ex-Mid Wales wagons, as I know the Cambrian did let Birmingham have both wagons and coaches. There was also the Waterworks Mail, a set of L.N.W. four-wheelers, but I have not so far come across evidence of there being any L.N.W. wagons. Can anyone offer confirmation please ?

If Mr. Moore has not yet obtained drawings of the ex-Metropolitan 4-4-0 I may be able to help, as again the Cambrian comes into it, having taken over six similar engines. I have not studied the W.S.M. specimen, but if it was one of those which had its cab if any added at Neasden I have an Oswestry-made outline drawing and a Neasden works photograph showing the rear.

Birmingham. RICK GREEN.

It had been my intention in any case to respond to Mr. Moore's appeal for information (RAILWAY MODELLER, January 1957), but unfortunately I was forestalled by Mr. F. T. Roche (RAILWAY MODELLER, March 1957). I would stress that this was unfortunate, since so much of Mr. Roche's material is wrong. Rather than list the points of dissension, I feel that it will be preferable for me to list the information that I have, leaving readers to make their own comparisons, should they so desire.

The construction of the line was authorized by Acts of 1855 and 1857. It was officially opened for traffic on September 28, 1859, and the owning company was taken over by the Ebbw Vale Iron and Steel Co. in 1864. This company leased the line, and introduced passenger traffic between Watchet and Coombe Row in September 1865. Four four-wheeled coaches were provided for this purpose. The line was closed entirely on November 7, 1898, but was reopened on July 4, 1907, by the Somerset Mineral Syndicate. It was again closed in 1909, but was used for signalling experiments during 1911.

Throughout its existence the line was standard gauge (4ft. 8½in.), and its locomotive stock is variously reported as six and seven. Two ("Rowcliffe" and "Brendon") were 0-6-0 saddle tanks, built in 1857 by Sharp Stewart and Co. (works Nos. 995 and 996). "Atlas" and "Pontypool" were also 0-6-0 saddle tanks of 1865, built by the same builders (works Nos. 1677 and 1678). The others (two or three ?) were 0-4-0 saddle tanks built by Neilsons between 1854 and 1861. These latter were referred to as "boxes," due to their shape, and worked on the incline above Coombe Row. The Somerset Mineral Syndicate purchased a 4-4-0 tank from the Metropolitan Railway (No. 37, class B), while the locomotives used in the signalling experiments were G.W.R. property. Signalling was by disc and crossbar.

The above information is based on an article in *Railways* (June-July 1947) by Messrs. R. J. Sellick and Arthur G. Wells, and the *Light Railway Handbook* (No. 4, Standard Gauge Light Railways), by R. W. Kidner. One of the illustrations in the former article shows the queerly worded wagon referred to by Mr. Roche coupled to the ex-Metropolitan Railway 4-4-0 tank. Quite clearly the lettering is B.C.W.W. with two vertical strappings. I would venture to suggest that these are the initials of a hirer, such as the Birmingham Carriage and Wagon Works. No doubt some reader can enlighten us on this point. Finally, should Mr. Moore require any further information or assistance, or the loan of the material referred to, he may contact me care of the Editor.

I trust, sir, that the tone of this letter is not too strong, as you no doubt will agree with me that wrong information, however well-meaning, is worse than useless. I crave your indulgence for my writing and the crossings out, etc., and beg to assure you that this is not my usual standard. It is due entirely to the extreme pressure on my time caused by studies for the Institute of Transport examination. I am already a graduate, and hope after the coming examination to be an associate member. This should then leave me time to reconstruct my own light railway (the Mid Wessex Light Railway).

My best wishes for thte continued success of your magazine.

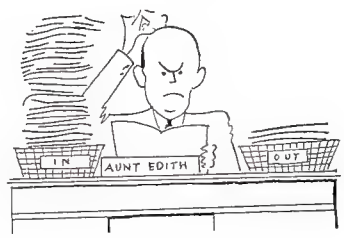
London. JOHN GREENOUGH.

This correspondence is now adjudged complete. We appear to have a most knowledgeable readership, to whom all thanks are due.

ED., R.M.

ADVICE BUREAU

Queries should be addressed to the Peco Technical Advice Bureau, Pecoway, Station Road, Seaton, and should be accompanied by a s.a.e. and coupon on page x. We regret that we cannot prepare special designs for individual readers.

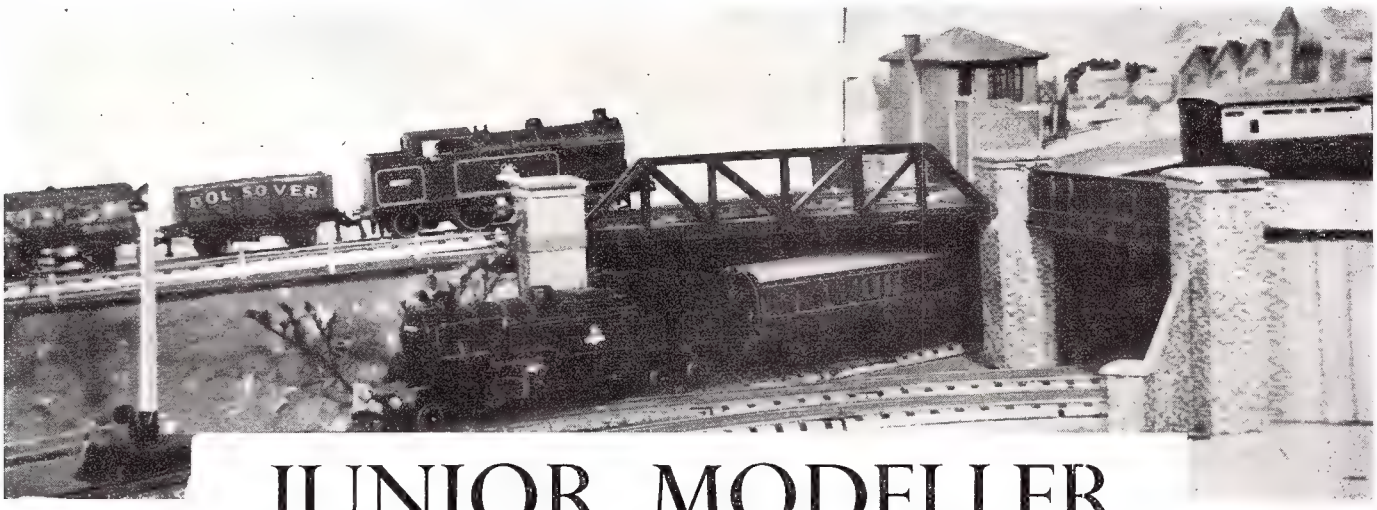


Having acquired a good deal of information, plus many pleasant hours of reading, from the RAILWAY MODELLER, *I intend to "make a start." I cannot, however, make up my mind about baseboard and support materials, or the various sizes of these. The room at my disposal measures 24ft.×12ft. and I intend to lay track around the four walls and up the centre, so you will appreciate the necessity for inexpensive materials. Must the baseboards be of wood ?*

D.R.McG., Atherstone.

The type of baseboard we have frequently described in the RAILWAY MODELLER, the most recent account being in the November 1956 issue, is in our opinion the most inexpensive that can be devised to give truly reliable service. Economy in baseboards is false economy, as your whole railway is built up on it, and once this is done repairs and modifications to the baseboard become virtually impossible without wrecking a great deal of hard work.

There is no cheaper surface materials than softboard, and similarly there is no cheaper material than wood for the legs. Considerable economy, however, could be obtained by using unprepared timber, that is to say rough sawn, for the supports and framework. However, it appears to us that probably your main reason for aiming at economy is that you have an exceptionally large area at your disposal. Quite apart from the cost of track and baseboards, merely to go once round the room, not to mention any internal sections, there is an even more important factor, the time taken to do this job properly. We suggest, therefore, that as a start you slice, say, the odd eight feet off the end of the area, leaving yourself a space 8ft. x 12ft. in which to build the nucleus of the railway, designing it so that it could be readily extended at some future date. Alternatively, you could begin by constructing a large terminus along one wall, running into a reversing loop so designed that tracks can be taken off to future extensions. Indeed, it is not impossible to design a station which can be used as a terminus and can later be extended into a true through station, while the main line forms a dumb-bell, that is to say a double track main line is terminated at each end into a reversing loop, thus giving the advantages of a continuous run combined with the appearance of point-to-point operation. In a 24ft. x 12ft. room you have ample room for this type of layout, which is regarded by many advanced workers as the ideal basic design.



JUNIOR MODELLER

THE WAVERLEY RAILWAY

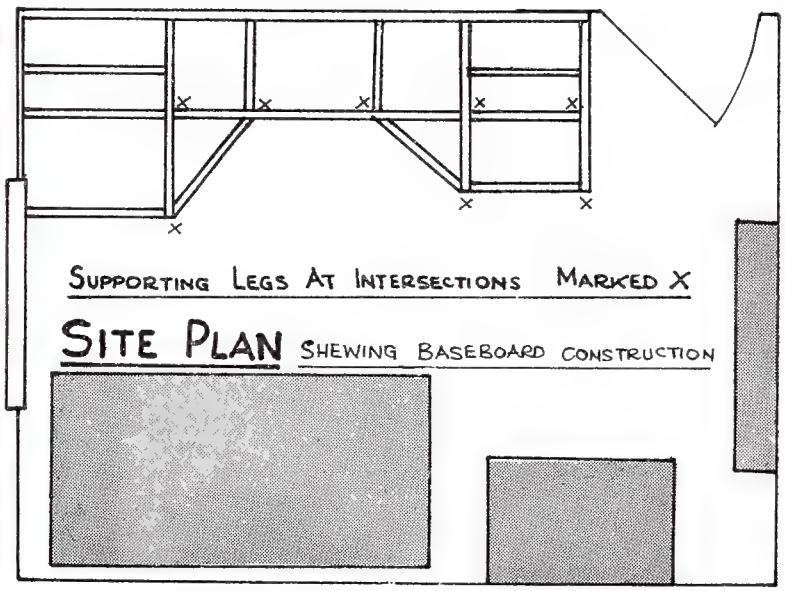
2-6-4 and suburban set approaching Lichfield from reversing loop. 0-6-2 and coal-trucks at terminus station throat.

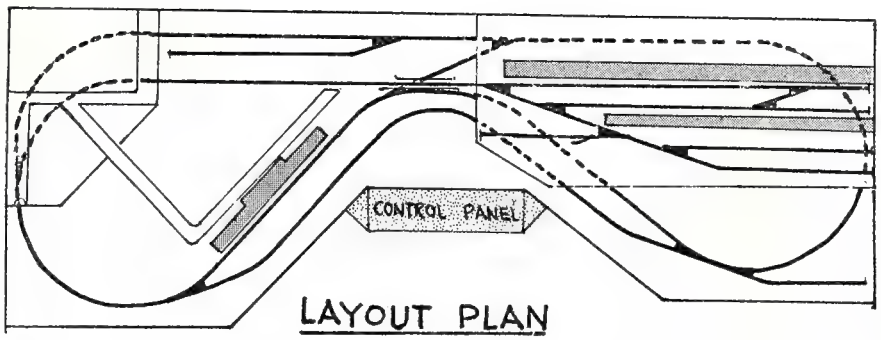
by J. and C. Knappet

The Story of a Proprietary Layout. Part II

THE bed on which the track is now laid has been built up in the simplest possible manner. A bearer, formed of one 6ft. and one 3ft. length of 1in. by 1in. timber, was Rawlplugged to the longer of the two adjoining walls, and a second bearer, 3ft. 3in. long, to the adjoining shorter wall. These carry the rear edges of the half-inch softboard which forms the main track base, the softboard itself being laid on a framework of 1in. by 1in. timber built out by three-inch angle-irons from the bearers and supported by legs of the same material, four of which are fastened to the floor for the sake of rigidity. Although screwed butt-joints only have been used (the preparation of which was greatly speeded up by the use of an electric hand drill), the whole structure has remained firm and free from any form of warping. The high-level baseboard, which carries the main terminus, is made of $\frac{1}{8}$in. hardboard, carried on wooden supports $2\frac{7}{8}$ inches above the main base, and has a removable strip five inches wide along its rear edge to facilitate access to the hidden track below. The smaller raised baseboard at the far end, which provides a foundation for certain of the buildings and acts as a roof for the further tunnelled section, is carried three and a half inches above main baseboard level, thus allowing sufficient headroom for the rising track at the left-hand tunnel mouth. It was this rising track, which connects the main circuit with the terminus, that gave most cause for concern in the planning stages by reason of its necessarily steep gradient, but we have found in practice that the rise of approximately one in twenty-eight presents no obstacle to any of the range of Dublo engines with a load of four coaches—although, purely as a concession to the spectacular, double heading is occasionally used. In this connection, it may be mentioned that the current consumption of two engines running simultaneously on the same section is well within the limits of

The company director at the controls.





LAYOUT PLAN

the older type of Dublo controller, provided that careful attention has been given to engine maintenance and brush-setting, but the more sensitive cut-out fitted to the newer type of controller unit does not always permit double-heading under load. An essential point to remember when planning gradients of this steepness is to make the final transition to level running as smooth as possible if Peco couplings are used, to avoid the inevitable uncoupling which will otherwise occur.

Electrically, the layout is controlled by a simplified cab system. All running rails are, of course, bonded together throughout by the metal-based track, but the third rail is split into two main sections. These two sections are fed, at will, from the output of either of the two controllers via two double-pole switches; thus one controller may govern either or both sections, but one section can never be connected, intentionally or otherwise, to two controllers simultaneously, thus avoiding the main headache of the cab system. Consequently, it is possible for shunting and general marshalling operations to be carried out within terminus limits concurrently with but independently of running on the continuous main circuit, or for the whole layout to be governed by one controller only when desired.

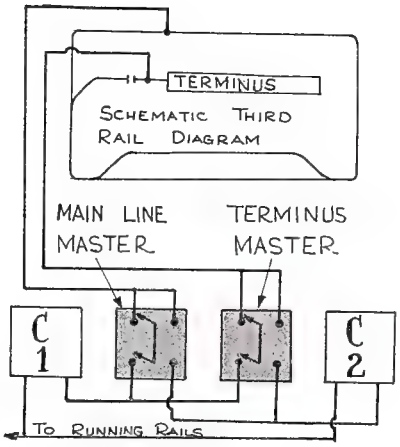
Within each of the two main sections the usual isolated sections are provided, actuated by single-pole on/off switches, where engines may be held stationary. Dead sections coming immediately before all buffer stops can be energized only by holding down spring-loaded on/off switches, which otherwise return themselves to the off position. This is often a useful precaution when control of the layout is handed over to two or three youthful enthusiasts!

Signalling, still incomplete (the usual cry!), is a mixture of Hornby-Dublo electrically operated signals and home-made two-aspect coloured light signals, using 14-volt pea bulbs. The latter are controlled from an ex-wireless push-button bank. This, being spring-loaded, automatically returns all buttons other than the one last pressed to the "off" position, and the double-pole contacts which are fitted are wired in to allow for the pressing of a button to display the green aspect of its associated signal, all other signals then being at red. When the next button is pressed, the green aspect of the next signal is energized, the former green aspect automatically returning to red. This is by no means prototype practice, but adds considerably to the fun of operation, when the breathless rush to ensure that a train is faced with a succession of green aspects has to be experienced to be believed!

The two points in the tunnelled sections are electrically controlled, the remainder being hand-operated. A separate transformer provides the current for subsidiary station lighting, all other current supplies being obtained from one or other of the three outputs of the Hornby-Dublo A3 power-control unit.

The four engines ("Duchess of Montrose," 2-6-4 tank and two 0-6-2 tanks) and rolling stock, except for the Peco wagons, are from the Hornby-Dublo range, and tribute may perhaps be paid to the extremely reliable and hardwearing nature of the standard Dublo mechanisms. Their only fault, except for the new 2-6-4 tank, is a certain "liveliness" in performance, which makes for unsatisfactory controllability at the lower speeds; at the upper limits of the controller scale it has been found advantageous to fit a small variable ballast resistance in series with the controller to limit maximum speed to something approaching reasonable proportions—another useful safeguard when over-enthusiastic operators are in session!

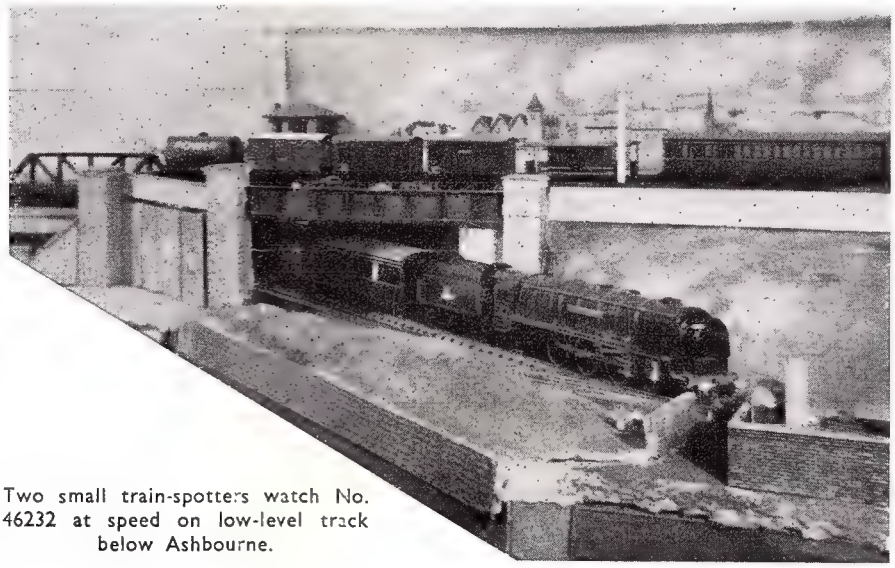
Buildings ganerally are made from the versatile Bilteezi range, adapted as necessary to suit particular circumstances; hills and embankments are made from white lint stretched over a crumpled newspaper base, sized, and painted in poster colours when dry.



Schematic cab control diagram.

The two double-pole switches shown shaded in the above diagram are labelled "Main Line Master" and "Terminus Master" respectively, and control the allocation of those two sections to the two controllers. By fixing the switches to the control panel to allow for a sideways throw, the switch levers automatically point to the controller connected to the section in question.
The isolating arrangements within the two main sections are not shown in the above diagram.

As indicated earlier, the time is approaching when the Waverley Railway Company will be engaged on further works of modification and conversion, and it is hoped that the railway's next appearance will be in the form of a two-rail end-to-end layout embodying a main line terminus, a branch terminus and hidden main-line storage sidings. This will make a little extra demand on space, the plans as at present drawn providing for one fixed 9ft. by 2ft. baseboard, to be joined at right angles by a removable 6ft. by 1ft. 6in. baseboard. The essence of a bedroom is that there shall be room for a bed. This requirement can still be met, but if any further developments take place it will be a question of getting into bed and carrying out operations from there! Or, alternatively, a hammock. . . .



Two small train-spotters watch No. 46232 at speed on low-level track below Ashbourne.

Personality Parade No. 65

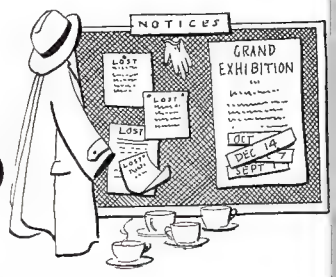
H. L. Smith

Barnsley and District Model Railway Club

Although H. L. Smith was fascinated from a boy, he was not able to begin modelling in earnest until his two sons arrived to provide the traditional excuse. He began with an "O" gauge indoor line, powered by steam locomotives, but in due course went over to the popular "OO" gauge.

He was the founder of the Barnsley and District Model Railway Club, and now serves as its secretary. He is also a founder member of the Barnsley Model and Experimental Engineering Society, another of his interests being ship modelling. He has won first prize at a Sheffield exhibition for a 30-inch working model of the Queen Mary.

CLUB NOTICE BOARD



NOTES AND NEWS

Narrow Gauge Railway Society

Unfortunately, due to recent illness, Mr. E. G. Cope has found it necessary to resign as hon. secretary of the above society.

Mr. P. S. Halton, 18 Eden Crescent, Leeds 4, has been appointed organizing secretary (in connection with visits, meetings, etc.), and inquiries concerning membership should now be addressed to Mr. A. S. Dunning, membership secretary and treasurer, N.G.R.S., 41 Longden Avenue, Beaumont Park, Huddersfield, Yorkshire; in both cases an s.a.e. for reply is essential.

The Edinburgh and Lothians Miniature Railway Club

The above-mentioned club is holding an exhibition at its headquarters in Advocates Close, High Street, Edinburgh, from May 17 to 26, 1957. The times of opening are as follows: Friday (opening day), 6.30 p.m. to 9.30 p.m.; weekdays, 6 p.m. to 9.30 p.m.; Saturdays, 2.30 p.m. to 9.30 p.m.; Sundays, 3 p.m. to 8.30 p.m.

"O" gauge and "OO" gauge layouts will be in operation and there will also be a Hornby-Dublo layout. It is to be hoped that the public will give their wholehearted support to this venture, and persons requiring further information should apply to the hon. secretary, Edinburgh and Lothians Miniature Railway Club, 26 Dalrymple Crescent, Edinburgh 9.

Harrow Model Railway Society

At the annual general meeting of the society, held recently in its premises at Kenton, it was decided to alter the long-established regular meeting night of Friday to every Thursday, as this was now found to be more convenient to most of the members.

As a result of operating experience on the society's "OO" gauge stud-contact and two-rail layouts during the past few years, alterations are to be carried out to the track layout at two of the terminal stations.

The society extends a cordial invitation to interested modellers to visit the clubroom. Details may be obtained from the hon. secretary, Mr. R. E. Wilson, 25 Hawthorne Avenue, Kenton, Harrow, Middlesex.

The Bradford and District Model Railway Society

The above society is now well and truly formed. It has obtained clubrooms, and has a gauge "O" layout well under way.

Meetings are held weekly, and the next project will be a "OO" gauge layout. Anyone interested in joining should contact the hon. secretary, Mr. W. Turner, 7 Ashbourne Haven, Bradford 2.

The Ramsgate and District Model Club

During this month Mr. Hefford, who is an authority on "OO" model motors and collectors, will be giving a talk at the club's comfortable new headquarters.

Another visit is also being arranged to Mr. Leigh Pemberton's 9in. gauge railway at Doddington, near Sittingbourne. This is always a popular and well-attended event, when members are allowed to drive these miniature trains. Many other attractive events are to be provided for the interest and enjoyment of members. Incidentally, membership is still on the up grade!

As the holiday season approaches the club extends a hearty welcome to fellow modellers and all who may be interested to visit its premises in Effingham Street, Ramsgate (at the rear of the fire station). The club is open on Wednesday and Friday evenings from 7.30 to 9.30.

All inquiries should be addressed to the hon. secretary, Mr. E. Church, 14 St. Mildred's Avenue, Ramsgate.

Norwood Model Railway Club

The above club—ever a glutton for punishment—is once again holding its annual exhibition at St. Luke's Hall, West Norwood, on May 11, opening at 12 o'clock. Supported by other clubs, it will be exhibiting models and working layouts in scales from ¼in. downwards. Ex-driver Laurie Earl (having had prototype experience) will be available to answer questions.

To placate wives, mothers and sweethearts, the ladies will be on hand with "cuppas" and other light refreshments.

London Transport is—unwittingly—aiding and abetting the club by providing Nos. 2, 2a, 3, 48, 68, 171, 195 and 196 buses and British Railways (S.R.) have obligingly put West Norwood station only five minutes walk away. Those attending are certain of an enjoyable time.

Inquiries concerning the club should be made to the hon. secretary, Mr. L. Bramma Smith, 9 Chestnut Road, West Norwood S.E.27.

North Middlesex Model Railway Club

The major event of the club year, the annual exhibition, will be held on Saturday, May 25, at Lacey Hall, Hazelwood Lane, Palmers Green.

The club's extensive "OO" gauge two-rail and three-rail layouts will be working throughout the afternoon. Other items of interest will include static displays of members' work and a competition section.

The club looks forward to seeing many old friends and making many new ones at the exhibition.

Further details of club activities and membership from Mr. J. A. Vincent, 48 Strafford Road, Barnet, Herts.

MAY MEETINGS

Birmingham Model Railway Club
8—"Experimental oddities in narrow gauge."
22—16.5mm. layout construction.
30—"The younger generation." Junior club members and newcomers are invited to discuss their modelling problems.

Fylde Model Railway Society
14—Open night.
28—Model railway pointwork. Mr. N. Dale.

Historical Model Railway Society
6—"The Greenwich Branch of the S.E.R." Mr. O J. Morris.

Hoddesdon and District Model Railway Society
1—"Railway photographs from my collection." Mr. George Dow.
8—Running night.
15—Layout construction.
22—Running night.
29—"Electrical wiring simplified." Mr. R. Chapple.

Merseyside Model Railway Society
22—"Early days of model railways." Mr. F. Shaw.

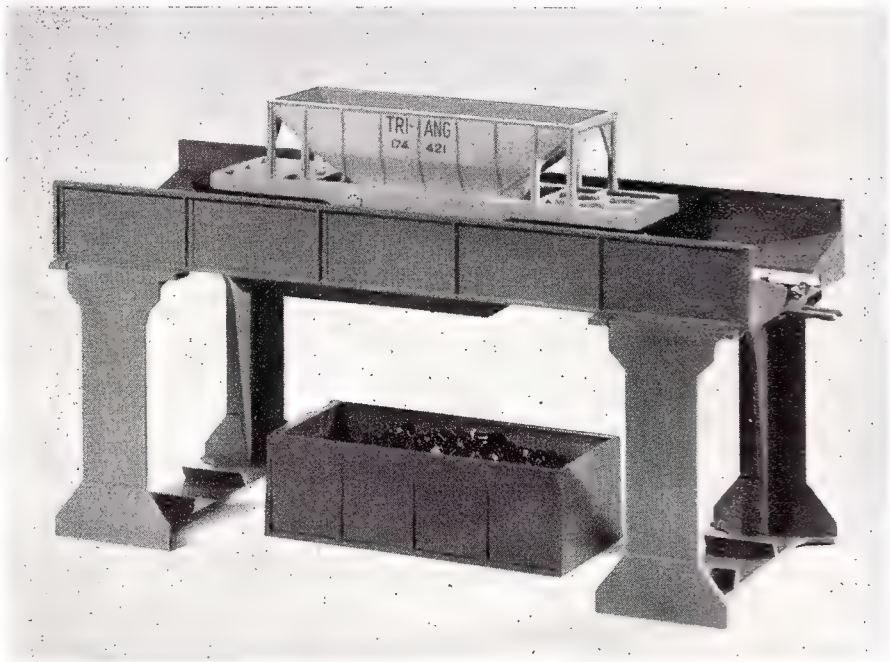
Model Railway Club
2—Track night (all groups) at Hammersmith.
16—Annual general meeting at Caxton Hall.
23—Track night (S.R.) at Hammersmith.

Tramway and Light Railway Society
2-4—Ilford and West Essex Model Railway Club exhibition.
11—"Plymouth Corporation Tramways." Mr. P. Murphy. Followed by a discussion on the technical points of this system.

Wimbledon Model Railway Club
8—"4mm." Mr. P. James.

TRADE WINDOW

A REVIEW OF NEW ITEMS SUBMITTED FOR OUR INSPECTION BY MEMBERS OF THE TRADE



TRI-ANG "OO" GAUGE HOPPER WAGON AND DUMPER UNIT

ROVEX SCALE MODELS

Margate, Kent.

Among the problems of the enthusiast who wants to add a touch of realism to his goods trains is the vexed matter of loading and unloading mineral wagons. One solution is the hopper wagon, combined with suitably modelled feeders and hoppers, but the construction of operating hopper wagons which will unload their contents only where required is a problem that only a few skilled modellers can successfully manage.

The new Tri-ang set will therefore prove a most welcome addition to their popular range of products for 16.5 mm. gauge layouts. The hopper wagon has, of course, been available as part of the Transcontinental series for some time now, but the addition of the unloading device adds the finishing touch to the model.

Although the wagon is strictly part of the Transcontinental range, it is nevertheless equally suited for use on a British line; indeed, hopper wagons for ore traffic have long been used in the north.

The principle of the hopper wagon is quite simple. The bottom door is released by a fixed catch on the side of the line, whereupon it falls open, discharging the load into whatever waits below.

A little farther on a central projection serves to push the hopper door back into position, thus permitting the wagon to be reloaded as desired.

In addition to the wagon and the operating unit, a selection of graded piers to carry the track up to the high level is provided, while the special piers which carry the unloading rails have provision to take another section of track beneath them. In this way the load may be emptied direct into another hopper, thus eliminating any handling, although from the viewpoint of strict realism this procedure is rather pointless, and will doubtless appeal only to the younger members of the family for its "play value."

It would appear to us that this model could best be used on a system where the loading and unloading functions could be separated. We envisage a large hopper above baseboard height, with a simple slide, rod operated, to enable the hopper wagon to be loaded. From here the loaded wagons would be taken to the staithes, which could perhaps feed a power station or an industry, or merely be provided with dummy frontages from which lorries would be loaded. In reality the coal or minerals would be shot into a suitable receptacle beneath the baseboard, which would be used to replenish the main hopper at intervals.

Many model railways are designed to join a quarry with a port—the Tri-ang hopper wagon is the essential adjunct to such a line.

ROSKOPF SOLDIERS, "HO" GAUGE

BRADSHAW MODEL PRODUCTS LTD.

40 Waterloo Street, Hove 2, Sussex.

3/6 per pkt. of 4 painted.
2/4 per pkt. of 4, unpainted.

An interesting addition to the growing range of figures for model railways are the Roskopf soldiers, in N.A.T.O. uniform, illustrated above. A useful feature is that the base forms a separate moulding, and therefore the models, when mounted permanently on the layout, can be fixed with a spot of cement without difficulty. Apart from their straightforward use as soldiers, they can be adapted as workmen or even uniform staff around the railway—the unpainted models being particularly applicable for this usage.

Bournemouth Model Railway Society

The above society, which is affiliated to the Association of Model Railway Clubs, has been holding meetings regularly since the end of August at 7.30 p.m. on the first and third Fridays in each month at Branksome Methodist Hall (next to Branksome station). It is hoped that the society will have a permanent headquarters in the near future.

All inquiries should be made to the hon. secretary, Mr. D. G Vule, 23 Elmsway, Southbourne, Bournemouth, Hants (telephone Southbourne 47728).

Sunderland and District Model Railway Club

Our joy at the recently reported finding of a "Utopia" in the way of clubrooms was short-lived. After revelling in the spaciousness of its three rooms for six months we became obliged to find other premises due to the impending sale of the property, the buyer requiring the whole of the premises. After a month of searching we found a large room near Fulwell mill which would admirably suit our needs. After cleaning and redecorating, it has provided us with a very comfortable and presentable clubroom. The junior layout has been erected and is in working order. The reference library has surpassed all expectations, and has proved a welcome added feature. A new "OO" gauge club layout is on the drawing board, the planning of which provides for its adaptability for exhibitions. New members are welcomed all the year round, juniors fifteen to eighteen years. All correspondence should be addressed to Mr. R. Lofthouse, 31 Darien Avenue, Fulwell, Sunderland.

BOOK REVIEWS

NARROW GAUGE ALBUM, by P. B. Whitehouse (Ian Allan, 25/-).

In recent years the interest in narrow gauge, both for its own sake and as a prototype for a model railway, has grown apace, and with it has come a steady supply of books on the subject. A pleasing point is that all these books have been of a commendably high standard and this, the latest addition, is no exception. Indeed, it is an absolute must for any narrow-gauge library.

The title is wholly and completely appropriate, for each chapter, with the exception of the introductory pages which set the narrow-gauge scene, is devoted to a single vignette of a narrow-gauge line. In this way we get a better picture than if we were to be given a brief potted history of the line, which at the best could do little more than repeat information that the thoroughgoing narrow-gauge fan already has on his bookshelves.

The text is excellent, but the illustrations are superb. The majority are new, and of those that have appeared before the majority are in out-of-print and hard-to-obtain publications. Moreover, as few of the illustrations are small, we discover fresh beauties that we did not know the print contained.

We would seriously suggest that this book, which is worth every penny of its price for the illustrations alone, should be in the library of every railway modeller who is at all interested in scenic modelling. Narrow-gauge railways almost invariably pass through delightful scenery, and the photographs in this book include dozens of beautiful situations. With *Narrow Gauge Album* at his side, the scenic modeller need never lack inspiration.

This is a book which will not only give pleasure to the specialized narrow-gauge enthusiast, but will provide the more general reader with a clear picture of the British narrow-gauge railway. The production is, we should add, superb, the book being printed throughout on art paper.

THE SCOTTIE BOOK OF MODEL RAILWAYS, by Gerald Pollinger (Transworld Publishers, 2/6).

This inexpensive paper-back publication attempts to cover the entire field of railway modelling in some 176 pages. In this it largely succeeds in so far that every principal item is mentioned and full reference is made to other publications for further reading.

The book is apparently slanted at the comparative beginner, and as such is an admirable piece of work. It contains a mass of information about contemporary proprietary equipment, but naturally several recent developments are not listed, though considering the difficulties of book production these omissions are few and far between. Prices ruling at the time of publication are given, but this we feel, though useful today, will perhaps be a trifle misleading in time. However, apart from this one minor point the book is excellent, and would form a useful introduction to the craft of railway modelling.

ILLUSTRATED GUIDE TO THE MIDLAND RAILWAY EXHIBIT, second edition (revised and enlarged) (Derby Museum and Art Gallery, 1/3).

In 1949 the committee of the Derby Museum and Art Gallery decided to devote a section of the museum to the history and development of some of the important industries of the town and county. As the majority of our readers know, Derby and the Midland Railway developed together in the last century, and therefore the exhibit had to feature the railway in no uncertain manner.

Undoubtedly the committee were men of foresight and imagination, for they decided that, whereas a static display in showcases would interest the enthusiast and historian, an actual working model railway would bring home to all the glory that was the Midland Railway. And so the Derby Museum layout was born.

This small booklet contains a short description and a large number of fine illustrations of this exquisite fine-scale "O" gauge line. For those who have visited the museum it forms a memento, but for every railway modeller this excellently produced booklet will serve as a spur to show him just what can be done to produce a truly realistic miniature railway.

THE MODERNIZATION PLAN GETS UNDER WAY

THE British Transport Commission announces the placing of contracts, of a total value of about £6,000,000, for sixty complete main-line electric locomotives and forty electric equipments; the latter will be used in locomotives to be built in British Railways workshops.

This is the third series of major contracts in connection with the electrification of British Railways to be announced this winter. In October last the Commission announced the placing of contracts for overhead line equipment for the Manchester—Crewe and Colchester—Clacton sections, and on January 16 this year further contracts worth about £8,000,000 for large quantities of electric train equipments and switchgear.

The locomotives now ordered are primarily intended for use on the Crewe—Manchester and Crewe—Liverpool lines, which form part of the extensive electrification programme in the London Midland Region. They are of two mixed-traffic types: Type A, designed to haul express passenger trains of up to 475 tons at speeds up to 100 m.p.h., or mineral trains of up to 950 tons at 55 m.p.h.; and Type B, having a maximum speed of 80 m.p.h. but capable of hauling mineral trains of up to 1,250 tons at 55 m.p.h.

Contracts for these two types have now been placed as follows:

	Type A	Type B
The British Thomson-Houston Co. Ltd., Rugby	20	5
and electrical equipments for locos to be built in B.R. locomotive workshops ...	40	—
The English Electric Company Ltd., Marconi House, Strand, W.C.2	10	5
The General Electric Company Ltd., Magnet House, Kingsway, W.C.2	5	5
Metropolitan-Vickers Electrical Co. Ltd., Trafford Park, Manchester	5	5
	80	20

Delivery of the locomotives is due to begin towards the end of 1958 and to be completed during 1960.

Technical Features

Both Type A and Type B locomotives will be of 3,300 h.p. continuous rating; the difference between the two types lies in their gear ratios. All the locomotives will be of the Bo-Bo type (eight wheels), with 20-ton axle loads, and with driving cabs at either end. They will conform to the B.R. standard loading goauge and will be suitable for duties on all regions. A wide range of standardization will be obtained, including standard pantographs and circuit breakers for all makes, while the layout of the driving cabs will be identical in all the locomotives. Their external appearance (in regard to which the Commission's recently established design panel will be consulted) will also be substantially the same.

The new locomotives are designed to operate on the 25,000 volts, 50-cycle A.C. system which the B.T.C. has decided to adopt as standard for future electrification. D.C. traction motors will be used, employing direct current supplied by transformers and rectifiers on the locomotives, with speed control by tap-changing. The motors will be carried on the bogie frames and will have fully flexible drive to the wheels, instead of being axle-hung. The electrical equipments will allow for the development of full power at both 25kV. and 6.6kV. The possibility is being considered of using germanium-type rectifiers on some of the locomotives to be supplied by the British Thomson-Houston Company.

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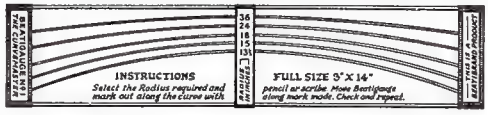
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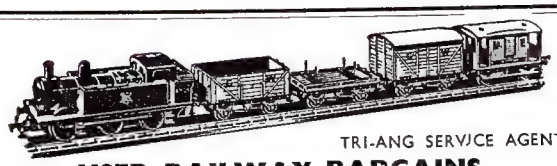

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"O" GAUGE: Leeds Model Co. wagons, **8/3, 9/2;** vans, **11/-,** plus 9d. postage. Bassett-Lowke "Prince Charles" loco and tender (electric), **£6/6/-.** Walkers sprung buffers (brass), **1/-** each. Hornby 0-4-0 clockwork loco and tender No. 50 (black), **41/6,** No. 51 (green) **41/6.** Catalogues: B/L **2/-,** Mills **1/-,** CCW **1/-,** Walkers **6d.,** Hornby **4d.,** postage extra.

"OO" GAUGE: Hornby-Dublo T.P.O. mail-van set, **38/6.** Trix controller with whistle, **29/6.** Rivarossi 0-4-0 diesel shunter, **£3/8/5.** Tri-ang remote controlled point, **19/3.** Tri-ang, Trix and Dublo catalogues, **1/-.** All items stocked by Peco, Wrenn, Gem, Welkut, Hamblings, Walkers, etc. Postage extra.

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In perfect condition : B.R. 2-6-4 tanks **55/-**, 0-6-2 tanks **37/6**; locos and tenders—Sir Nigel Gresley (blue) **55/-**, L.M.S. Duchess of Atholl (maroon) **59/6**, B.R. Silver King **57/6**, Duchess of Montrose **63/-**; rails **2/6**; half rails **1/6**; diamonds **6/6**; transformers **25/-**; controllers **35/-**; battery controllers **22/6**; A3 power units **85/-**.

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Tri-ang conversions with H/D twin centre-rail collectors, Peco couplings : 0-6-0 class 3F tanks **50/-**, 0-6-0 diesel shunters **50/-**, also G.W.R. 0-6-0 pannier tanks (die-cast metal bodies) **59/6**.

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H/Dublo conversions suitable Wrenn, etc. trackwork : B.R. 0-6-2 tanks **70/-**, B.R. 2-6-4 tanks **90/-**; B.R. Silver King and tenders, **99/6**; B.R. Duchess of Montrose and tenders **105/-**.

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TRI-ANG BARGAINS : Princess locos and tenders **35/-**, 4-6-4 tank locos **39/6**, American R54 locos and tenders **45/-**, curved rails **1/6**, diamonds **7/6**, hand points **8/6**, remote points **13/6**, power units **32/6** (**45/-** type), 0-6-0 bodies **3/6**, battery boxes **5/-**.

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IT'S NEW

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PRE-CUT, LETTERED AND EMBOSSED BODY SECTIONS.
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All produced on heavy, top-quality card. These kits, which can be easily inspected in their transparent packets, also include ⅛in. wood base, buffer beams, wire and detailed instructions.

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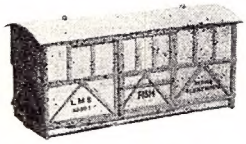

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PECO SPIKED TRACK KITS
In nickel silver or treated steel.

TRACK
Yard packs, complete.
Nickel silver **5/6,** treated steel **4/-.**

POINTS
A complete kit, with accurately cut rails and precision point base. Needs no soldering ! Suitable for right- or left-hand 19in. radius turnouts.
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Factory, Tunnel faces, Semi-detached House, Suburban Bungalow, Chapel, Cottages.
Six new sheets for the new scale !
1/10 each

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hand-operated
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ERG 3-link Spring Type ... ... per pkt. 7d.

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Wagon, 4½mm. round head	1/6	1/–
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Parallel, 4½mm. round head	1/6	1/–

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For full details and prices send s.a.e.

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Bullhead section, nickel silver	doz. yds.	10/3
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THE LATEST K's SUPER DETAILED KITS :

G.W.R. 0-4-2 LOCO KIT
Complete with K's Mark I motor, turned brass wheels mounted on axles, spring buffers, 35 : 1 gearing
£4/16/-

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Four-wheel single deck, complete with Mark II motor, wheels, etc.
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These kits, in keeping with the wagons, are fully riveted and can be simply glued together if required.

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RIVAROSSI

TWO NEW SHUNTING TYPE LOCOS

Available next month will be two new 0-4-0 shunting locos, one of American prototype and the other European. These contain all the fine workmanship and finish of previous Rivarossi models, including the famous Rivarossi motor. Here is real value.

L 0-4-0 American type.
L RR European type.

39/6 EACH INCLUDING P.T.

AND THE NEW CONSOLIDATION 2-8-0

Here are two more locomotives, one American prototype which will be ready in July and the other Italian prototype which will be available next month. These locomotives are absolutely fully detailed and are the finest examples of commercially made models yet to be seen.

L 280/R American type.
L 740/R Italian type.

PRICE £12/14/11

DIESEL "B" UNITS

Available this month will be "B" units for all the five Rivarossi diesels. These will be available as follows :

AFM/B Western Pacific.
AFMS/B Southern Pacific.
AFMT/B Texas Pacific.
AFMC/B Chicago and North Western.
AFMM/B Monon Route.

ALL 54/- EACH

SOLE DISTRIBUTORS FOR RIVAROSSI

IN THE LEAD AGAIN!

FIVE NEW WAGONS

The following five new super-detailed wagons will be available towards the end of this month.

CF 25	Four-wheel flat wagon ...	**17/11**
C Box 2	Bogie box car	**33/8**
C Flat T	Flat wagon with stakes ...	**29/6**
C Tank 1	Bogie tank wagon ...	**42/–**
C Der	Crane derrick wagon ...	**35/6**

THE FAMOUS SOUTHERN PACIFIC IN KIT FORM

Also available this month will be the Rivarossi "Southern Pacific" in kit form. This will be supplied as an austerity kit, and a separate kit of parts for super detailing the finished loco is also available.

SM SP	Southern Pacific kit ...	**£7/4/–**
DL 4	Super detail kit	**£1/13/8**

THREE NEW COACHES

Two new coaches of the International Company type will be available in October, and available this month will be a fine model of the new stainless steel sleeping car. These will be available as under:

B AL 37	International coach first class ...	**38/6**
V DUZ 46	International baggage coach ...	**38/6**
V LP	New stainless steel sleeping car	**48/–**

All the prices listed above are inclusive of purchase tax at the pre-Budget rate. Any alteration which has taken place in the Budget is, of course, immediately effective.

Rivarossi are also introducing many other new lines this year and full details will be available in the new Rivarossi catalogue which should be ready for distribution by June. For further information and the first look at these exciting new lines, contact your Rivarossi agent immediately.

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